

Route Management Tool (RMT) Version 1.20

User's Guide

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Introduction

What is RMT?

Metron Aviation, Inc. developed the Route Management Tool (RMT) to facilitate increased information exchange between Air Route Traffic Control Centers (ARTCC), the Air Traffic Control System Command Center (ATCSCC), and the airline user community. RMT is a database query Tool that allows users to view the centralized Coded Departure Routes (CDR) and Advanced Navigation Routes (ANR) databases and related tables from the National Flight Data Center (NFDC). Future versions of RMT will include other sources of routing information, such as the National Playbook.

RMT is available in two formats: web RMT and RMT Version 1.20.

*Note that the procedures for ANRs are still being developed. The ANR Tool is part of RMT 1.20, but is currently disabled. The ANR Tool will be enabled as soon as the policies and procedures for using ANRs are finalized. The searching and loading options for ANRs are similar to CDRs; therefore, instructions for these tools are combined throughout this text. You will be notified when the ANR Tool is enabled.

Web RMT

Web RMT is a searchable, web-accessible database with coded departure route, advanced navigation route, preferred route, airway intersection, and location identifier information. This version of RMT uses the Coded Departure Routes (CDR) and Advanced Navigation Routes (ANR) operational databases and is available through the FAA Air Traffic Control System Command Center's web site: <http://www.fly.faa.gov>. Anyone can access the RMT program in this way to search the databases. However, the web version does not contain any functionality beyond searching or downloading the CDR and ANR operational databases to a file.

RMT Version 1.20

Metron Aviation, Inc. greatly enhanced the web version of RMT to create the RMT client (RMT Version 1.20), which is a software program you install on your computer and run like any other computer application. Using the Tools in Metron's Route Management Tool (RMT) version 1.20 software, you can search for, modify¹ and view coded departure routes, advanced navigation routes, preferred routes, location identifiers, airway intersections, and preferred arrival routes².

RMT contains several Tools for its users:

- (1) CDR Tool
- (2) ANR Tool³
- (3) NFDC Tool

¹ Only administrators at ARTCCs and the ATCSCC can modify CDRs or ANRs.

² FAA users only

³ The ANR Tool is currently disabled.

(4) RMT Map

The CDR Tool

The CDR Tool contains a searchable database of coded departure routes. The database is referred to in this document as the CDR Database. Coded departure routes are alternate air traffic routings and refined coordination procedures designed to allow flights to depart as efficiently as possible when severe weather or air traffic congestion prevents using normal routes.

Using the *CDR Staging Database*, administrators at each Air Route Traffic Control Center (ARTCC) and the FAA's Air Traffic Control System Command Center (ATCSCC) enter and modify routes as necessary. The ATCSCC administrator can modify all coded departure routes in this database, while each ARTCC can modify only those coded departure routes that originate from their own center. Airline users have view-only access to the staging database. This allows the airlines or their designated entities to view and download the routes for the next update in time to publish them internally.

The entire CDR Database is updated every fifty-six days. At the end of this period, the staging database becomes the *Operational Database*. The Operational Database contains CDRs that are valid for the current 56-day period. The ATCSCC administrator can view and modify routes in the operational database, while ARTCC and airline users have view-only capability.

The ANR Tool

The ANR Tool contains a searchable database of advanced navigation routes. This database is referred to as the ANR Database in this document. Advanced navigation routes use the concept of area navigation and eliminate the need for aircraft to over-fly ground-based navigational aids.

Managing the ANR database in RMT is almost identical to the CDR Database. Administrators at ARTCCs and the ATCSCC can create and modify routes as necessary using the ANR Staging Database. The entire ANR Database is updated every fifty-six days, at which time the staging database becomes the operational database.

Please note that the ANR Tool is currently disabled. It will be enabled in future versions.

The NFDC Tool

The NFDC Tool contains a collection of tables with preferred routes, location identifiers, airway intersections, and preferred arrival routes⁴. The preferred route, location identifier, and airway intersection information in the database is updated every 56 days with information provided by the National Flight Data Center (NFDC). Preferred arrival routes are currently included in the NFDC Tool as a convenience to RMT users. Information for preferred arrival routes was originally derived from the ACES database and is not currently being updated according to the 56-day chart cycle. The NFDC Tool is provided strictly for your reference; information found in the NFDC Tool cannot be modified using RMT.

The RMT Map

The RMT Map displays routes and other information queried in the CDR Tool and the NFDC Tool. The RMT Map contains a variety of optional overlays and customization Tools for users.

⁴ Only ARTCC and ATCSCC users can view preferred arrival routes.

Text Conventions

This document uses several conventions that you should be aware of while reading. The following table explains the most common abbreviations and symbols used in this document.

Abbreviations	
ANR Database	This refers to the staging or operational database of advanced navigation routes in RMT. Users search for advanced navigation routes in RMT's ANR Tool. The RMT Map uses the ANR Database to display advanced navigation routes.
ANR Tool	The specific Tool within RMT that contains a searchable database of advanced navigation routes. The ANR Tool is currently disabled and will be enabled in future RMT versions.
ARTCC	A United States Air Route Traffic Control Center. Each ARTCC is responsible for controlling air traffic within a specific section of airspace. There are 22 U.S. ARTCCs.
ATCSCC	The Federal Aviation Administration's Air Traffic Control System Command Center located in Herndon, Virginia.
FAA	Federal Aviation Administration
RMT	Metron Aviation, Inc.'s Route Management Tool software, which contains the CDR Tool, ANR Tool, NFDC Tool, and RMT Map.
RMT Database	This refers to the collection of databases contained in RMT. The CDR Operational and Staging Databases contain coded departure routes. The ANR Operational and Staging Databases contain advanced navigation routes. The NFDC Database is actually a collection of tables with information about location identifiers, preferred routes, etc.
RMT Map	The map Tool within RMT
CDR Database	This refers to the staging or operational database of coded departure routes in RMT. Users search for coded departure routes in RMT's CDR Tool and the RMT Map uses the CDR Database to display coded departure routes.
CDR Tool	The specific Tool within RMT that contains a searchable database of coded departure routes.
NFDC Tables	The set of database tables provided by the NFDC and used by RMT's NFDC Tool as a utility for its users.
NFDC Tool	The specific Tool within RMT that contains a searchable database of preferred routes, location identifiers, airway intersections, and preferred arrival routes ⁵ provided by the National Flight Data Center.
Symbols Used	
Ctrl	The Ctrl (control) key on your computer keyboard
+	When the '+' symbol appears, you need to perform two actions at once to complete a function. For example, Shift + S indicates that you should press the Shift key and the S on your computer keyboard to perform a

⁵ Preferred arrival routes are actually derived from the ACES database. They are included in the NFDC Tool as a convenience to RMT users.

	function.
>	The > is used to indicate a menu option. For example, Window>Cascade indicates that Cascade is an option under the RMT Window menu.
Ctrl-click	Press the Ctrl (control) key on your keyboard while clicking on an item with your mouse.
Shift-click	Press the Shift key on your keyboard while clicking on an item with your mouse.
&	"And." An operator used in CDR Tool and NFDC Tool searches to include results with more than one parameter.
	"Or." An operator used in CDR Tool and NFDC Tool searches to include results with more than one parameter.
!	"Not." An operator used in CDR Tool and NFDC Tool searches to exclude results with certain parameters.

Technical Support

To inquire about problems or information regarding RMT, contact:

Karyl Owings
 Technical Support Coordinator
 Metron Aviation, Inc.
 131 Elden Street, Suite 200
 Herndon, Virginia 20170
 (703) 456-0123
RMT_support@metsci.com

Getting Started

Installation Instructions

Please note that if you have a previous version of RMT currently installed, you will need to delete that version before you install RMT 1.20. To delete an older version of RMT, simply delete the RMT directory.

Windows/Windows NT Installation & RMT Startup

To install RMT from the Internet, contact RMT Support for the site address, username, and password.

1. Download the appropriate setup file to a temporary directory. Airlines should download **setup_airline.exe**. Centers should download **setup_center.exe**.
2. In the temporary directory, double-click on the **setup.exe** file to begin the installation process.
3. Follow the setup instructions.
4. The default installation directory is C:\Program Files\RMT1.20. You can use the default setting or specify another directory.
5. Depending on your user type, double-click either the **rmt120_airline.exe** or **rmt120_center.exe** file to start RMT.
6. To create a shortcut on your desktop, **right-click** on the rmt120_airline.exe or rmt120_center.exe file and select **Create Shortcut** from the pop-up menu. Then click and drag the shortcut to a location on your desktop. Once the shortcut is created, you can right-click on the shortcut, go to **Properties**, and select **Change Icon** to use the icon provided in the RMT installation directory.

To install RMT from a CD, use the following procedure:

1. Insert the RMT 1.20 CD into your CD-ROM drive.
2. Open your computer's Explorer function to find the CD-ROM drive.
3. Double-click on the setup.exe file to open it and begin the installation process.
4. The default installation directory is C:\Program Files\RMT1.20. You can use the default setting or specify another directory.
5. Start the RMT client to make sure there were no errors during installation by double-clicking on **rmt120.exe** in the RMT directory.
6. To create a shortcut on your desktop, **right-click** on the rmt120_airline.exe or rmt120_center.exe file and select **Create Shortcut** from the pop-up menu. Then click and drag the shortcut to a location on your desktop. Once the shortcut is created, you can right-click on the shortcut, go to **Properties**, and select **Change Icon** to use the icon provided in the RMT installation directory.

Linux Users Installation & RMT Startup

To install RMT from the Internet, contact RMT Support for the site address, username, and password.

1. Download the **setup_XXX.bin** file to a temporary directory.
2. Type **./setup_XXX.bin** inside that temporary directory.
3. Follow the setup instructions.
4. Change to the Installation directory.
5. Type **./rmt120** to run the program.

Updating Your Current RMT Version

You will want to update your software as new data files and new versions of RMT are released. An autoupdate program is included in the RMT installation package. If you log in to RMT after either new data files or a new release is available, a window will prompt you to update RMT with the new files. We recommend that you complete the process at that time to ensure that you have all the current files and do not receive errors. Click **Yes** to start the processing or **No** to continue your session without updating. Note that the overlays for the RMT map are updated with the latest NFDC data every 56 days on the chart date. You will be prompted to perform the auto update at that time. While the auto update program is running, you should see a DOS window and a progress window that shows the number of files being downloaded. When the processing has finished, you will get a message stating that your auto update has completed successfully.

Logging On to RMT

At the time of installation, you should receive a user name and password from Metron technical support. Your user name and password determine your level of access to the information contained in RMT database(s). There are 6 different types of RMT users:

- (1) atccsc- ATCCSC users who have view-only access to RMT information.
- (2) admin_atccsc - ATCCSC administrator who has both read and write capabilities in RMT.
- (3) ATA-100- User that verifies the records contained in RMT.
- (4) artcc - Center users who have view-only access to RMT information.
- (5) admin_artcc - Center administrator who has both read and write capabilities in RMT.
- (6) airline - Airline users who have view-only access to RMT information.

Please note that all user names and passwords are case-sensitive.

Once you start RMT, a login window appears. In the login window, enter your user name and password (Figure 1). To save your user name and password information between RMT sessions, click the **Save User Name/Password** option so that the box is checked. This will save your login information to your local configuration file so that you do not have to type in the information every time you log in to the system.



Figure 1: Login Window

After you have entered your log-in information, click **OK**. The RMT program display should appear on your screen. To close the login screen without logging on to RMT, click **Cancel**.

System Information

You can view specific system information at any time during your RMT session. For example, you can view user and system configuration details, log files of your session, database registration information, and the software version. This information is provided for your reference and to aid you in troubleshooting software problems.

Database Registration Information

When you first open the RMT program, a window pops up in front of the Tool windows with database registration information. You can access this window at any time by selecting **Help > Show DB Register Info** (Figure 2).

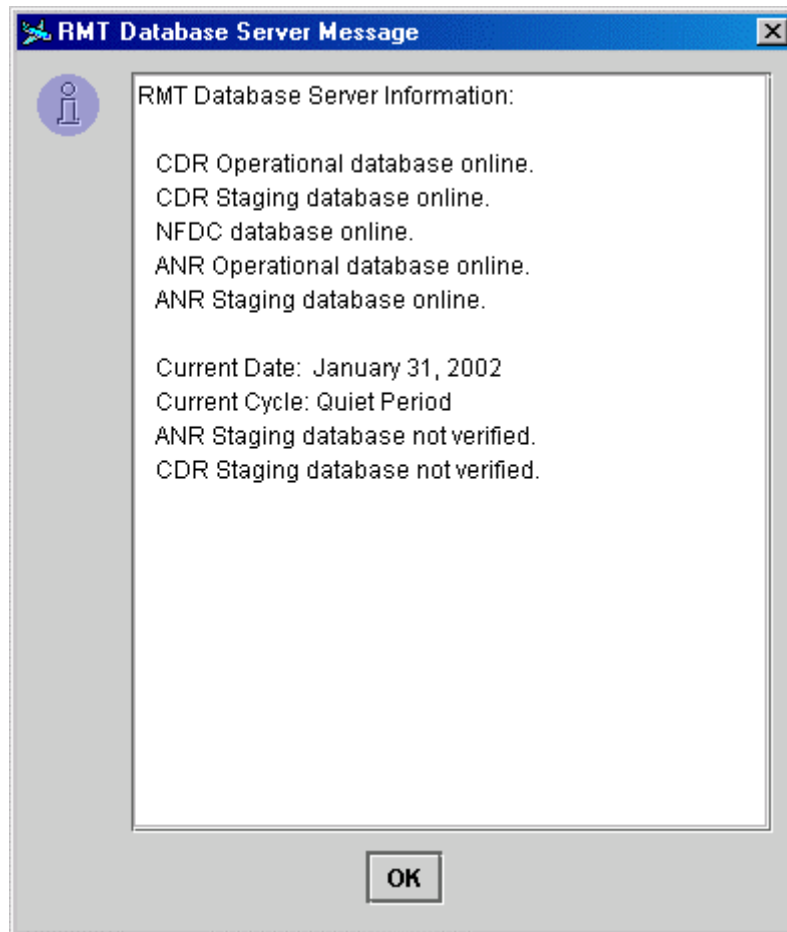


Figure 2: DB Register Info for a Read-only User

The **RMT Database Server Message** window gives you information about the RMT database to which you are connected. This information is updated every time you open the window. RMT database information includes:

- **Database Server Information** - Gives the server status for the CDR Staging and Operational databases, ANR Staging and Operational Databases, and NFDC database. If

a database is "online," then your connection to the database should be up and running. The databases are updated every 56 days on the chart date. If you happen to log on to the system at the time during which the database upload is occurring, RMT indicates that the staging to operational copy is in progress or the NFDC database is being loaded. If this is the case, you will need to shut down RMT and log on once the chart date processing has been completed.

- **Current Date** - The date on which you log in to RMT.
- **Current Cycle** - Both the CDR and ANR databases are updated according to a 56-day chart cycle. Within that chart cycle, there are different periods. For example, during the 21-day "Active" period, center administrators are making changes to the ANR and CDR routes in their respective Staging databases.
- **Staging Database Status** - Indicates whether the routes in the ANR and CDR Staging databases have been verified. Once routes are verified, they do not change and will be copied to the operational database on the next chart date.
- **Current Users (FAA Admin Users Only)** - Administrator users have an additional section of information in the Database Server Message window that shows which RMT users are logged on to the system.

User Configuration

Viewing your user configuration is useful to see what changes you have made to any of the RMT program's Tool settings. For example, you may change the way search results are displayed in the CDR Tool and want to review the changes. Any changes to your display settings are saved to your user configuration file. To view these changes, select **Help > View User Configuration**.

The **Config Params** window opens and lets you view configuration settings for RMT. To view specific parameters, click the magnifying glass icon. Clicking this icon will display additional configuration settings. Click the icon again to hide the settings. Click **OK** to close the Config Params window.

Note that you cannot actually change settings from the Config Params window. Settings can be changed in each RMT Tool. This manual tells you how to change your Tool displays in later chapters.

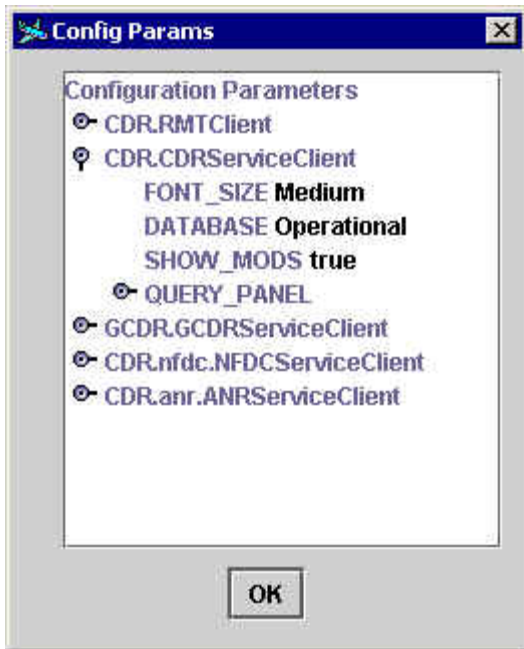


Figure 3: User Configuration Settings

By default, the user configuration file is saved as **rmtusrcfg.ini** in your profiles directory on Windows NT systems. UNIX users can find their user configuration file in their home directory.

To use the default user configuration settings, find the user configuration file with your personal settings. Either delete this file or change its name. Once this is done, the system will revert to using the default settings in the default user configuration file.

To let others use your settings, simply copy your personal user configuration file and paste it into the RMT directory on another computer.

System Configuration

Your system configuration varies depending on your user type. Viewing the system configuration allows you to see the server-side settings for the RMT program. You cannot change your system configuration. To view these settings, select **Help > View System Configuration**.

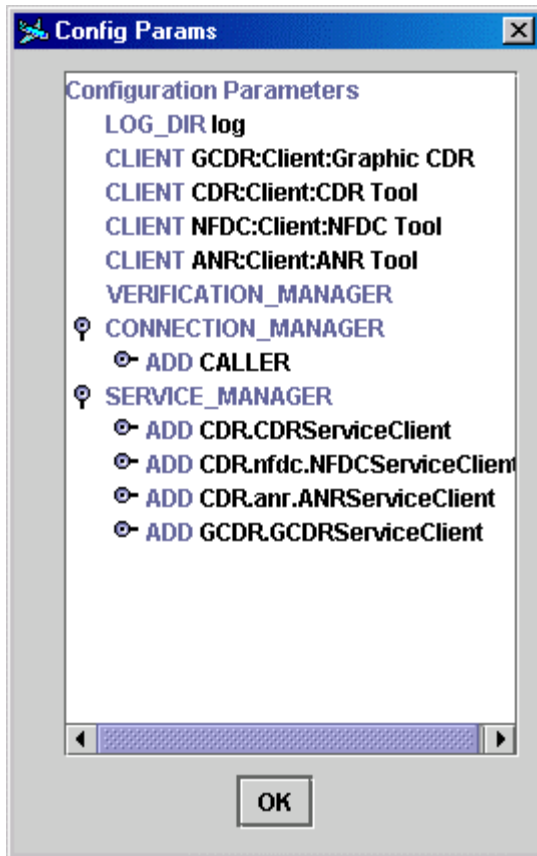


Figure 4: System Configuration Settings

The **Config Params** window opens and lets you view system configuration settings for RMT. To view specific parameters, click the magnifying glass icon. Clicking this icon will display additional system settings. Click the icon again to hide the settings.

Note that you cannot actually change system settings from the Config Params window.

Click **OK** to close the Config Params window.

Log Files

Log files are created in the RMT log directory every time you open the software. As you work in RMT, information about the session is saved to your system in Log Files. For example, log files contain database connection data and data about the RMT session start and end. Viewing log files of your session can be especially useful when troubleshooting problems.

View Log Files

To view your log files, select **Help > View Log Files**. The **Log File Viewer** window opens. The Log File Viewer is divided into two panes. In the left pane, you can view all the available log files for each RMT Tool. In the right pane, you can view the contents of the file.

In the left pane, double-click any folder to view the log files within that folder. Clicking a log file will highlight the file so that you can perform an action on that file. You can use shift-click or Ctrl-click to select multiple files.

- To view the contents of the log file, click the **Open** button. The log file appears in the right-hand pane of the Log File Viewer.
- To delete a file, select the file(s) to be deleted. Once you select the desired files, click the **Delete** button.

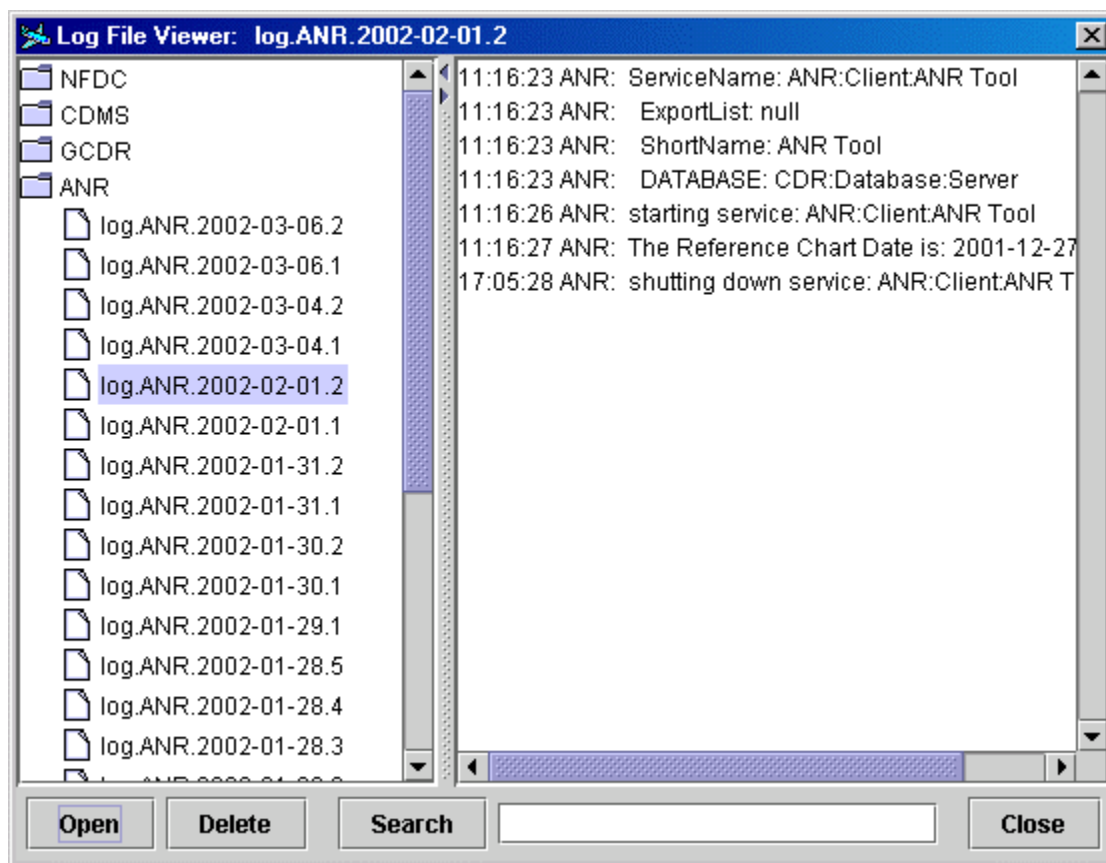


Figure 5: Log Files Window

Use the **Search** field to look for specific words or phrases within the file. This can aid in quick troubleshooting. To search the log file, type in the text you are looking for in the text field to the right of the search button and click **Search**.

To close the log file text window, click **Close**.

View Chart Dates

Coded departure routes (CDRs) and advanced navigation routes (ANRs) are each stored in two separate databases: the *Operational* database and the *Staging* database. The operational database remains valid for a 56-day cycle and is updated on a scheduled *chart date*.

To update the operational database, administrators use the staging database. The staging database begins as a replica of the operational database, but changes as route records are updated. Every 56 days, the staging database is switched over by the ATCSCC administrator and becomes the operational database.

Within the 56-day chart cycle, the staging database goes through 3 periods: **Active**, **Verification**, and **Quiet**. The *Active* period lasts 21 days and is the time during which center administrators actively make changes to the route records. Once the route records are modified, FAA ATA-100 and the ATCSCC must verify all records for accuracy during the 5-day *Verification* period. Once the verification process is complete, the staging database remains frozen during a 30-day *Quiet*

period. The quiet period gives airline users a chance to preview the new route records and meet any publication deadlines they have.

You can view the 56-day cycle dates, including the chart dates on which a new operational database becomes effective and date ranges for the 3 periods of the staging database. Select **Help > Show Chart Dates** to open the **Chart Dates** window (Figure 6).

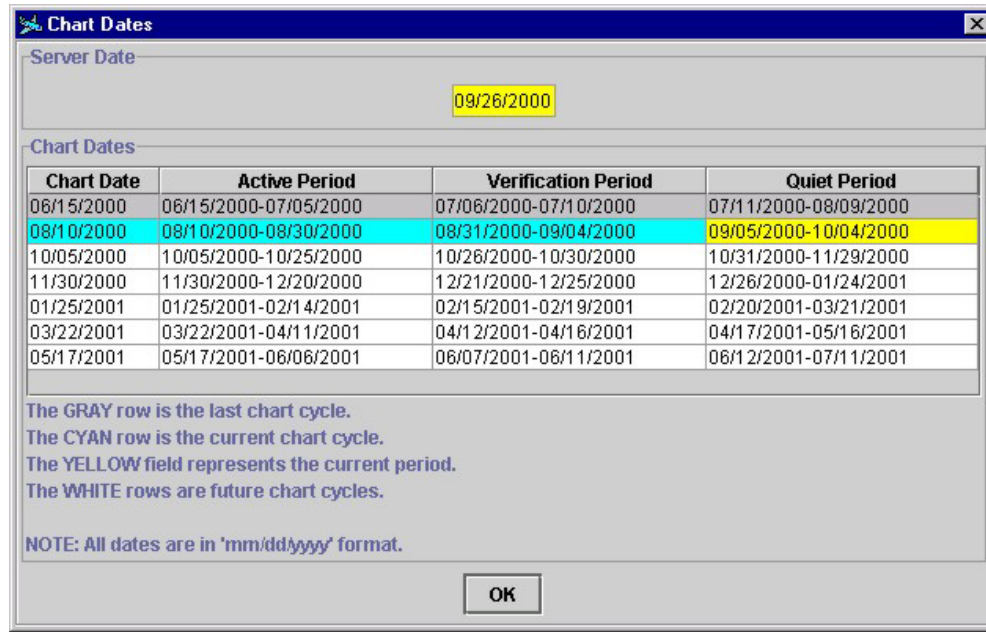


Figure 6: Show Chart Dates

Dates in gray are those cycles that have already occurred. Dates in yellow indicate the current chart period. Dates in cyan indicate the current 56-day chart cycle. Dates in white indicate future chart cycles.

Online Help

While working in RMT you can access online help. The online help allows you to search through the RMT User's Guide using your computer. To access online help, select **Help > User's Guide**. A pop-up window displays folders that contain information for each chapter of the User's Guide. Double-click a folder to access the topics in that chapter or heading. Click a page to view the page online.

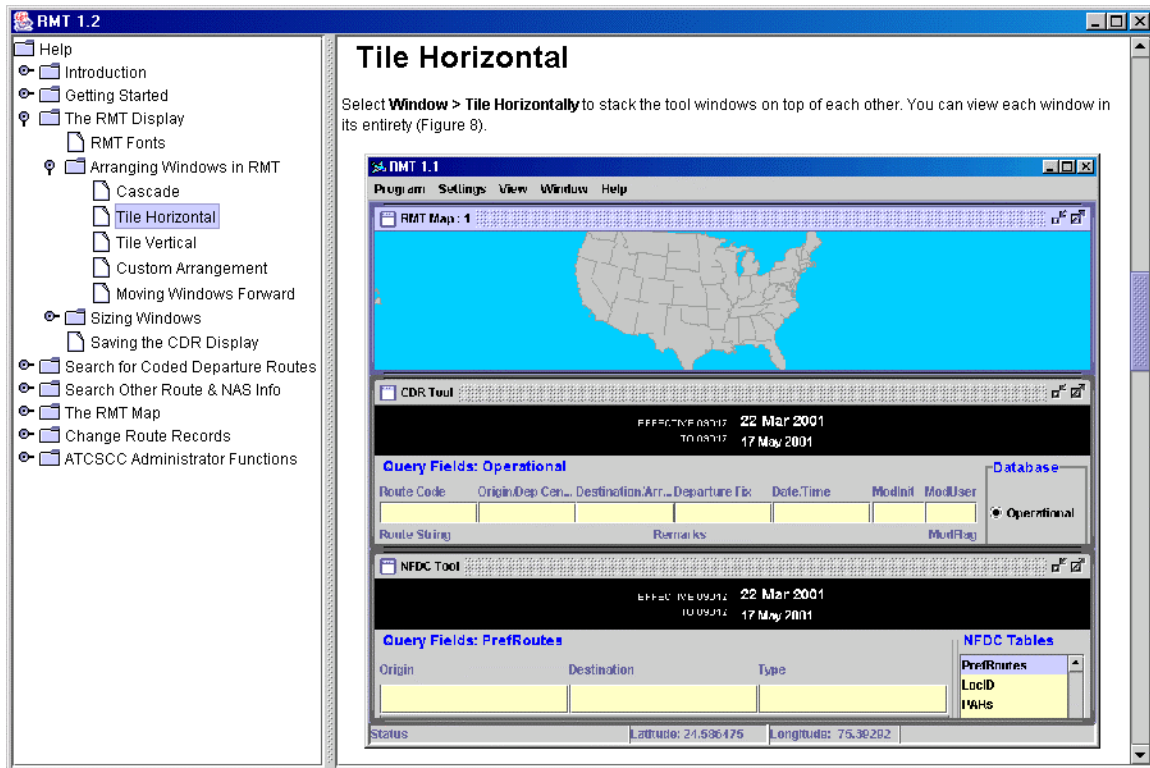


Figure 7: Online Help Display

About the Software

Use **Help > About** to view basic information about the RMT software, including the version number and which RMT database you are using.

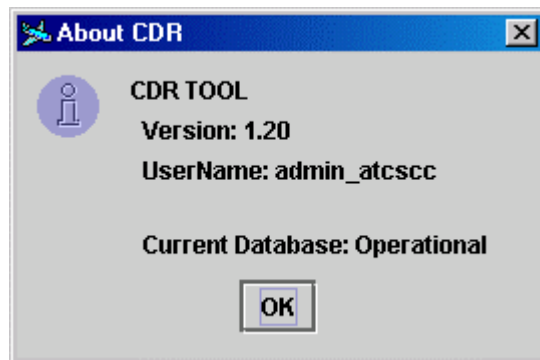


Figure 8: Help > About for the CDR Tool

Close RMT

To close the RMT program, select **File > Quit**, click the **X** button in the upper right corner of the main RMT program window (Windows/NT/UNIX platforms), or type **Ctrl + Q**.

The RMT Display

Each RMT Tool appears in a different window, with Tool-specific menus and unique, customizable displays. An overview of the RMT display is given in this chapter. The individual Tool displays are described in their own chapters.

RMT Fonts

When you open RMT, the default font size is Medium. To change the font size, select **Settings > Fonts** and click Small Font, Medium Font, or Large Font.

Arranging Windows in RMT

There are two ways to display the RMT Tools: Tabbed Display and MDI Display. You can change the Tool window arrangement and sizes, as well as decide which Tools are displayed in RMT.

Tab Display

Choosing the Tabbed Display option arranges the windows in RMT such that they are maximized and positioned behind each other. Tabs along the top of the windows allow you to move between Tools. Select **Window > Tab Display Layout** to arrange the windows in this manner.

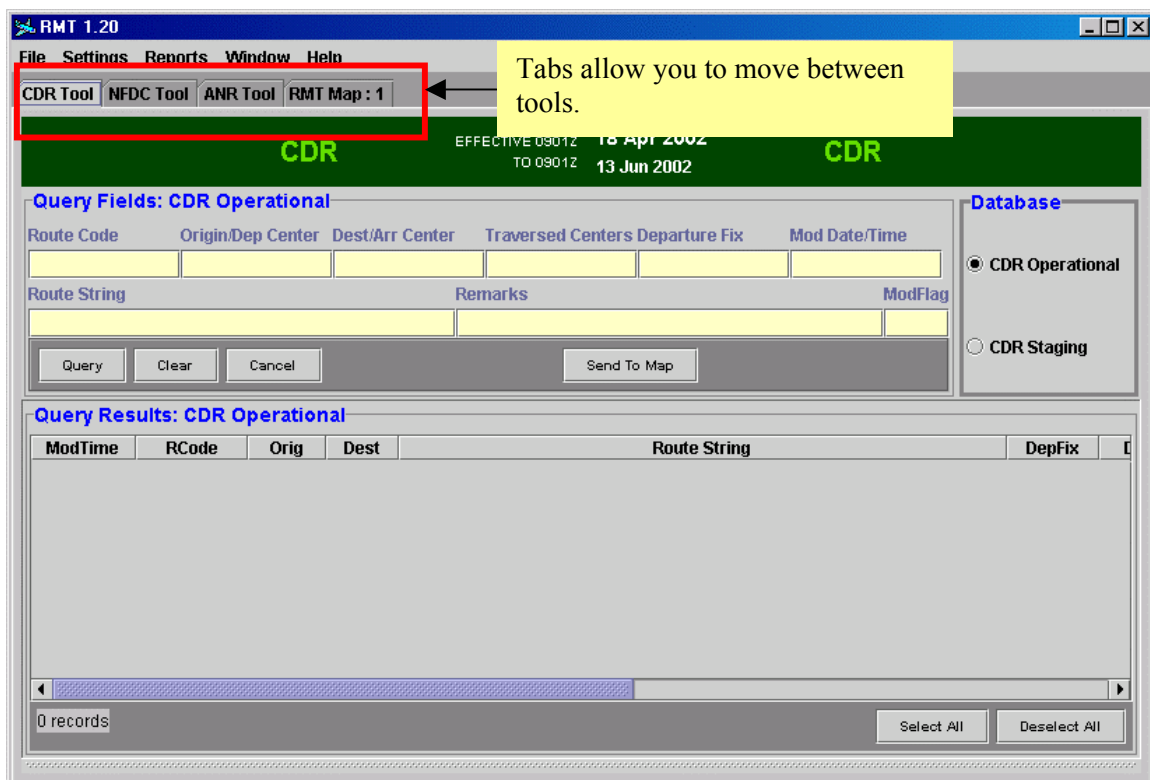


Figure 9: Tab Display Layout

MDI Display

The MDI Display option allows you to arrange the windows manually or according to several pre-set options. To arrange windows in RMT according to the MDI Display, select **Window > MDI Display**. Pre-set options can be selected when the MDI Display mode is in effect:

- (1) Cascade
- (2) Tile Horizontal
- (3) Tile Vertical

Custom Arrangement

Click and drag the title bar of any window to move the Tool window to another location in the RMT display. You can arrange the windows in any way you want by using the click and drag method.

Cascade

Cascade arranges the windows in front of each other, leaving the title bar of each Tool window visible. You can arrange the Tool windows in this way by selecting **Windows > Cascade**.

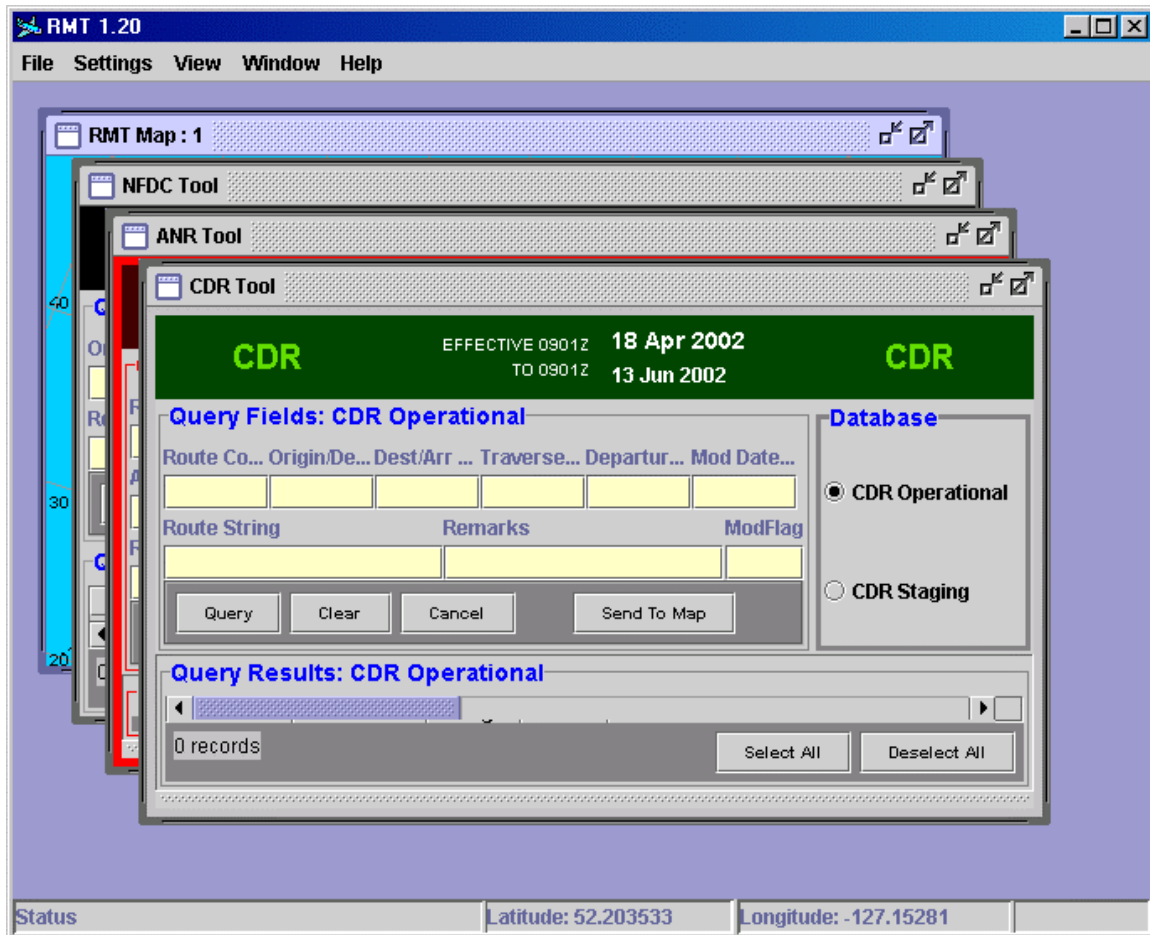


Figure 10: Cascade Option for Windows

Tile Horizontal

Select **Window > Tile Horizontally** to stack the Tool windows on top of each other (Figure 11).

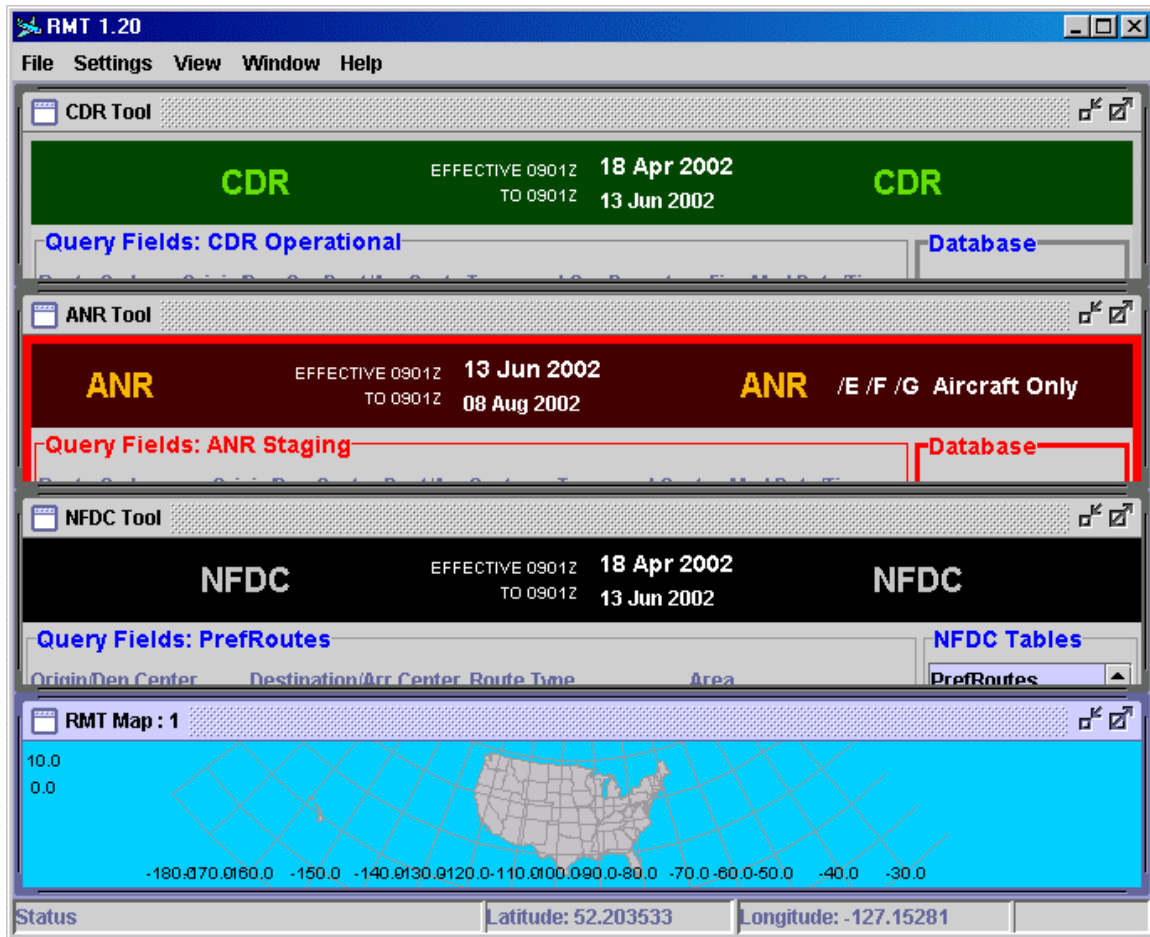


Figure 11: Tile Horizontal

Tile Vertical

Select **Window > Tile Vertically** to arrange the windows side by side (Figure 12).

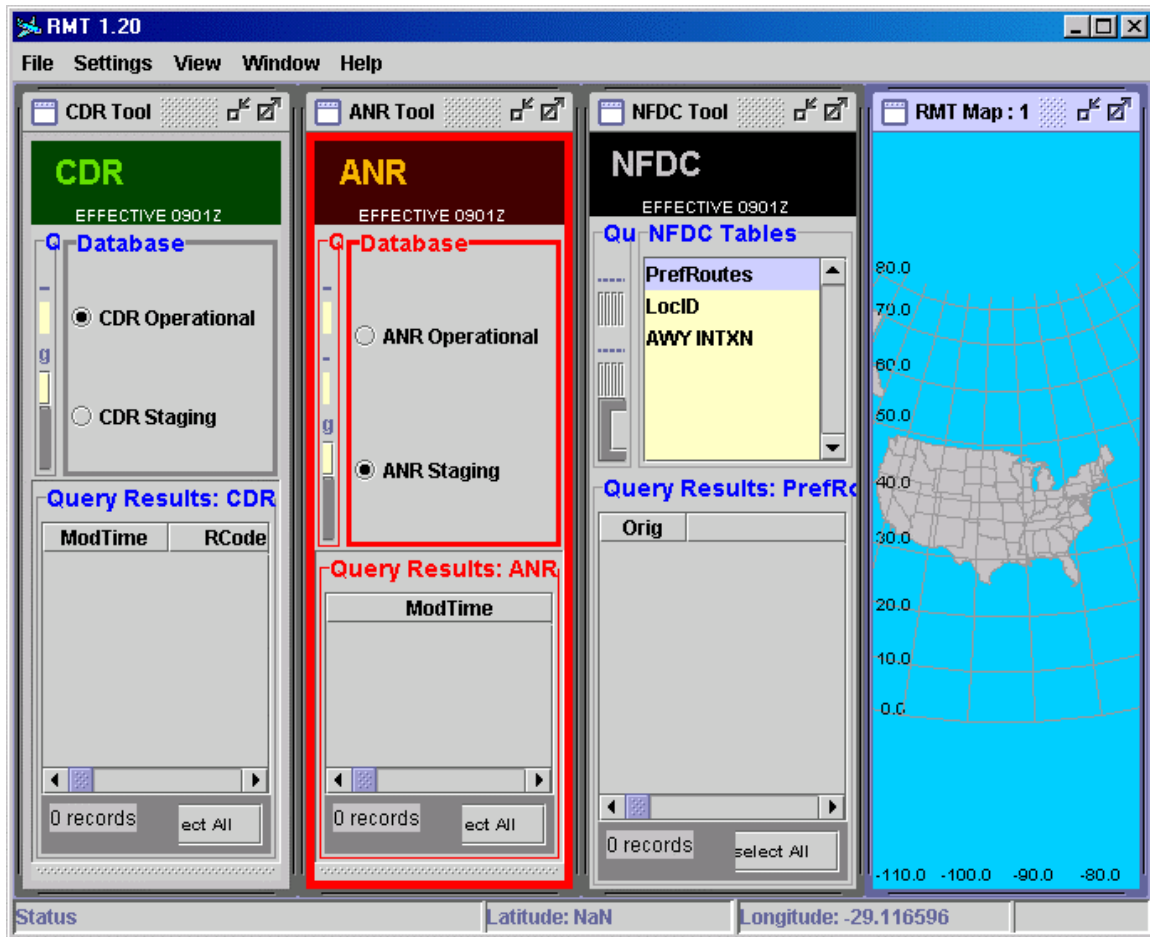


Figure 12: Tile Vertical

Moving Windows Forward

Depending on the way your Tool windows are arranged, you may have only a partial view of a window. If the Tool window you wish to view is hidden, either click the title bar of the Tool window or use the **Window** menu to put that Tool window in front of the others. The main RMT menu will change according to the active tool window.

Minimize

To *minimize* a Tool window, click the icon in the upper right corner with the small box and an arrow pointing down and to the left. This will reduce the window to a small icon in the corner of RMT. Click the Tool window icon to return the window to its original size. Or click the Tool name under the Window menu to return the Tool window to its original size. To minimize RMT, Windows and UNIX users can click the minimize icon on the RMT program window.



Figure 13: Minimize A Tool Window



Figure 14: Minimize RMT (Windows)

Maximize

To *maximize* a Tool window, click the icon in the upper right corner with the large box and an arrow pointing up and to the right (Figure 15). This will enlarge the Tool window to the size of the RMT window, so that you see only the maximized Tool window. To maximize RMT, Windows and UNIX users can click the maximize icon on the RMT window (Figure 16). Click the same icon to return the RMT window or Tool window to its original size.



Figure 15: Maximize a Tool Window



Figure 16: Maximize RMT (Windows)

Custom Size

You can *size* any of the windows, including the main RMT window, by placing your cursor on a window border. When the cursor changes to a double arrow, click and drag the window border to the desired size.

Saving the RMT Display

Any changes you make to the Tool window arrangement will be saved between sessions. So when you open RMT, the Tool windows will be arranged in the same manner as when you quit your most recent RMT session. Also, any directory you define for saving search, report, and map files will be saved as the default directory for saving these files.

If you make changes to the display in an individual Tool, the changes are not automatically saved. You may save your Tool changes to your local configuration file. For example, you can save your column order, map overlays and colors, and default database. However, these changes must be made manually and individually for each Tool because you may want to save your settings for one Tool window but not another. For more information on saving Tool window settings, see "Save Your Settings" on page 45.

Perform a Search

To view the information in RMT, you must first conduct a search for the data in the appropriate Tool. For example, to view coded departure routes, you will perform a search in the CDR Tool. Using the ANR Tool, you can search for and view advanced navigation routes. In the NFDC Tool, you can search for preferred routes, preferred arrival routes, and location identifiers.

Choose A Tool

To begin a search, you must first select the appropriate Tool to use for the search.

- **CDR Tool** - The *CDR Tool* contains a searchable database of coded departure routes, the CDR Database. Coded departure routes are alternate air traffic routings and refined coordination procedures designed to allow flights to depart as efficiently as possible when severe weather or air traffic congestion prevents using normal routes.
- **ANR Tool** - The *ANR Tool* contains a searchable database of advanced navigation routes. Advanced navigation routes use the concept of area navigation and eliminate the need for aircraft to over-fly ground-based navigational aids. The ANR Tool is currently disabled and will be enabled in future RMT versions.
- **NFDC Tool** - The *NFDC Tool* contains a collection of tables with preferred routes, location identifiers, airway intersections, and preferred arrival routes[†]. The tables are updated every 56 days with preferred route, location identifier, and airway intersection information provided by the National Flight Data Center (NFDC). Preferred arrival routes are included in the NFDC Tool, but were originally derived from the ACES database and are not updated according to the 56-day chart cycle.

Searching in the CDR and ANR Tools

When you begin a search in the CDR or ANR Tool, you must select either the *Staging* or *Operational* database by clicking the appropriate radio button. The Staging database changes frequently because it is used to update routes. This database is then copied to the Operational database every 56 days according to a specific chart date. The Operational database is then valid for the next 56 days. Note that when you search for routes in the Staging database, the Tool sections are outlined in red.

[†] Only ARTCC and ATCSCC users can view preferred arrival routes.

The screenshot shows the CDR Tool interface. At the top, it says "CDR Tool" in the title bar. Below that, a green header bar contains "CDR" on the left, "EFFECTIVE 0901Z 08 Aug 2002 TO 0901Z 03 Oct 2002" in the center, and "CDR" on the right. The main area is divided into three sections, each outlined in red:

- Query Fields: CDR Staging**: This section contains two rows of input fields. The first row has fields for "Route Code", "Origin/Dep...", "Dest/Arr C...", "Traversed...", "Departure...", and "Mod Date/...". The second row has fields for "Route String", "Remarks", "ModInit", "ModUser", and "ModFlag". Below these fields are buttons for "Query", "Clear", "Cancel", "New", "Update", and "Delete".
- Database**: This section contains two radio buttons: "CDR Operational" and "CDR Staging". The "CDR Staging" button is selected.
- Query Results: CDR Staging**: This section shows a scrollable list of results. It indicates "0 records" and has "Select All" and "Deselect All" buttons.

At the bottom, there is a **Modifications** section with tabs for "Global Modifications" and "Local Modifications". Below the tabs are buttons for "Refresh", "Recalculate", "New", "Update", and "Delete".

Figure 17: Searching the ANR or CDR Tool Staging Database Outlines Sections in Red

Searching in the NFDC Tool

The NFDC Tool contains several reference tables provided by the National Flight Data Center.

- **Preferred Routes (PrefRoutes)** - These are Preferred IFR Routes.
- **Location Identifier (LocID)** - The abbreviation or acronym used to refer to airports, centers and locations.
- **Airway Intersections (AWY INTXN)** - The intersection points where airways cross each other. Note that this table includes only the unnamed, numbered fixes. Named fixes (e.g. PETTY, WISKE) are not included in the table. Named fixes will be included in later versions of RMT.
- **Preferred Arrival Routes (PARs)** - Only FAA users may view these routes. These routes were originally derived from the ACES database and are not updated according to the 56-day chart cycle. They are included in the NFDC Tool as a convenience to FAA users.

To start your search, make sure you have chosen the correct NFDC table to search by clicking the appropriate table name in the **NFDC Tables** section of the NFDC Tool. For example, if you want to search Location Identifiers, make sure you click LocID in the NFDC Tables section. This will bring up the appropriate query fields for you to use in your search.

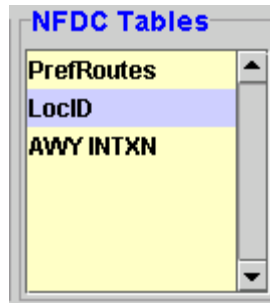


Figure 18: Select the NFDC Table You Wish To Search

Enter Search Parameters

In each Tool, there are several specific *query fields*. Use the query fields to type in the *parameters* for your search. A search parameter could be one of the elements that make up the actual record (for example, an airport, airway, navaid, or jet route) or information related to the record (for example, the date the record was created or modified or remarks associated with the record).

If you do not enter any search parameters and select the Query button or press Enter, your search results will include every record in the database you are searching. This can be a time-consuming process, as there are sometimes thousands of routes in a database.

You must enter parameters in the query fields to perform a more specific search. The query fields in each Tool are provided for your convenience. You do not have to fill in every input field to perform a search. You may find that there are some query fields that you rarely or never use when searching. How general or specific the search is directly relates to the number of parameters you enter in the query fields. The less query fields you fill in, the more general your search and vice versa.

Query Fields

Each Tool has query fields specific to the type of search you are conducting. To access information about the fields, place and hold your cursor over the text box of a particular field. Information about the query field and the format to use when filling in that field will appear on your screen.

Query Fields in the CDR Tool

Query Fields: Operational					
Route Code	Origin/Dep Center	Dest/Arr Center	Traversed Centers	Departure Fix	Mod Date/Time
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Route String			Remarks	ModFlag	
<input type="text"/>			<input type="text"/>	<input type="text"/>	

Figure 19: CDR Tool Query Fields

The available query fields in the CDR Tool are:

- **Route Code-** Enter the route code: an 8-character route designator made up of the 3-character departure airport code, 3-character arrival airport code, and a 2-character facility-designated code.
- **Origin/Dep Center (Origin or Departure Center)** – Enter the 3 or 4-character airport or center code to identify the route's point of origin (Canadian airports require the 4-character ICAO codes. Anchorage, AK and Honolulu, HI require PANC and PHNL, respectively).
- **Destination/Arr Center (Destination or Arrival Center)** - Enter either the 3-character code for the destination airport or the 3-character code for the arrival center.
- **Traversed Centers** - Enter the 3-character code for a center through which the flight path traverses. To enter multiple centers, see the section that tells you how to "Use "Or" to Include More than One of the Same Parameter" on page 32.
- **Departure Fix-** Enter a departure fix.
- **Mod Date/Time-** Enter the date/time of the record's creation or last modification. For example, enter 09/14/2000 to display all routes created or modified on that date. You may search for routes created during a range of dates using the greater than (>) and less than (<) symbols. To include the date you have entered in your search, use "greater/less than or equal to" logic (>= or <=). Dates must be entered in MM/DD/YYYY format (2-character month - 2-character date - 4-character year). Entering a time is optional, but must be entered in HH:MM:SS format (2-character hour:2character minute:2-character seconds).
- **Route String-** Enter an element of the route string (i.e. a fix, navaid, or airport code).
- **Remarks** - Use this field to perform a search based on any remarks entered about route changes or new record additions.
- **ModFlag (Modification Flag)** - A modification flag indicates changes made to the routes. To view a route according to its modified status you can type **D** (Deleted record), **M** (Modified record), **N** (New record), or a hyphen (-) to see existing, unchanged records.
- **Mod Init (Modifier's Initials)** - This column is specific to FAA administrators and will appear as a blank field to any other user types. To view routes modified by a particular person, type in their FAA-assigned initials. These differ from the actual initials of the person's name.
- **Mod User (Modifier's User Type)** - To view routes modified by a specific user type, type in the login name (i.e. admin_atcscc) that corresponds to that user type. Note that different people can be logged in under the same user type.

Query Fields in the ANR Tool

Advanced navigation routes use the concept of area navigation and eliminate the need for aircraft to over-fly ground-based navigational aids.

Query Fields: ANR Operational				
Route Code	Origin/Dep Center	Dest/Arr Center	Traversed Centers	Mod Date/Time
Altitude	Aircraft Types	Additional Info	Effective Times	
Route String	Remarks			ModFlag

Figure 20: ANR Tool Query Fields

Query fields available in the ANR Tool are:

- **Route Code** - Enter the route code: an 8-character route designator made up of the 2-character facility-designated code, 3-character departure airport code, and 3-character arrival airport code.
- **Origin/Dep Center (Departure Center)** – Enter the airport or center code to identify the route's point of origin (Canadian airports require the 4-character ICAO codes. Anchorage, AK and Honolulu, HI require PANC and PHNL, respectively).
- **Dest/Arr Center (Destination/Arrival Center)** - Enter either the 3 or 4-character code for the destination airport or the 3-character code for the arrival center.
- **Traversed Centers** - Enter the 3-character code for a center through which the flight path traverses. Note that multiple centers can be entered in this field.
- **Mod Date/Time (Modification Date/Time)** - Enter the date/time of the record's creation or last modification. For example, enter 09/14/2000 to display all routes created or modified on that date. You may search for routes created during a range of dates using the greater than (>), greater than or equal to (>=), less than (<), or less than or equal to (<=) symbols. Dates must be entered in MM/DD/YYYY format (2-character month - 2-character date - 4-character year). Entering a time is optional, but must be entered in HH:MM:SS format (2-character hour: 2-character minute: 2-character seconds).
- **Altitude** - Enter an altitude for the route. Altitudes are assumed to be in the thousands. For example, to find routes that utilize an altitude of 30,000 feet, you only need to enter "30."
- **Aircraft Types** - Enter the type of aircraft that will utilize the route: prop, jet, or turbo.
- **Additional Info** - Additional information about each route may be included in the database. For example, additional information may include warnings about which aircraft can and cannot utilize the route. Enter any criteria in this field that would be considered additional information for an ANR.
- **Effective Times** - ANRs may not be effective for the entire day. To see which routes are valid at a particular time, enter the time range in this field (i.e. 1200-1600). Note that all times are GMT.
- **Route String** - Enter an element of the route string (i.e. a fix, navaid, or airport code).
- **Remarks** - Use this field to perform a search based on any remarks entered about route changes or new record additions.
- **ModFlag (Modification Flag)** - A modification flag is used to indicate any changes made to the route record since the last chart date. To view a route according to its modification status, you can type **M** (Modified record), **N** (New record), **D** (Deleted record), or a hyphen (-) to see existing, unchanged records.

Query Fields in the NFDC Tool

Preferred Routes Database

To search for FAA Preferred IFR Routes, choose the PrefRoutes table. The available query fields for the PrefRoutes table are:

- **Origin/Dep (Departure) Center** - Enter either the 3-character origin airport code or the 3-character code for the departure center. (Note that the 4-character ICAO codes are not used for airports in this Tool).
- **Destination/Arr (Arrival) Center** - Enter the 3-character destination airport code or the 3-character code for the arrival center. (Note that the 4-character ICAO codes are not used for airports in this Tool).
- **Route Type**- Enter the type of route. The following codes are valid in the Type field: **L** (low altitude), **H** (high altitude), **LSD** (low altitude single direction), **HSD** (high altitude single direction), **SLD** (special low altitude directional), **SHD** (special high altitude directional), and **TEC** (tower en route control).
- **Area** - RMT lists routes according to city pairs; however, not all preferred routes are limited to a particular city pair. Many routes are valid for several origin and/or destination airports. To find routes that are valid in a geographic area, you can enter information in this field. Note that the data contained in this field may vary between records, so your search results may actually be broader than what appears in the Query Results section. Useful entries for this field include city names and "metro" areas. For example, entering "Chicago Metro" should bring up routes that are valid at ORD, MDW, and possibly other nearby airports.
- **Route String** - Enter an element of the route string (i.e. a fix, navaid, or airport code).
- **Altitude** - Enter an altitude for the route. Altitudes are automatically assumed to be in the thousands. For example, to find routes that utilize an altitude of 30,000 feet, you only need to enter "30."
- **Aircraft Types** - Enter the type of aircraft that will utilize the route: prop, jet, or turbo.
- **Direction** - This field denotes the direction in which the route is valid. For example, some routes are only useable for northbound flights. Note that the data contained in this field may vary between records. For example, southbound routes may be denoted by "Southbound" or "Sbound." It is probably more useful to include entire words in this field, such as "east" or "northeast." You can also use the abbreviation for the direction (N, E, S, W) in conjunction with the word "bound" to find routes for a particular direction. However, if you enter a single letter (i.e. "S"), all routes with the letter "S" in the "Direction" field will appear. This includes routes that go south, west, and east.

Query Fields: PrefRoutes			
Origin/Dep Center	Destination/Arr Center	Route Type	Area
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Route String	Altitude	Aircraft Types	Direction
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Figure 21: PrefRoutes Query Fields

Location Identifiers Database

In the NAS, airports, centers and geographical locations are often referred to with abbreviations or acronyms. The abbreviation is called a location identifier. To search for a location identifier, choose the LocID table in the NFDC Tool. The available query fields for the LocID table are:

- **Location ID** - Enter the location identifier code.
- **Facility Name & Type** - You can specify the name and/or type of location identifier for which you are searching. For example, to search for vortacs, type "vortac" into this field.
- **City, State** - Enter a city and/or state name to view all the facilities in that region.
- **FL TWO** - Search for facilities with a flight watch station. Type a "Y" into the field to find all facilities with a flight watch station. Type an "N" in the field to find facilities without a flight watch station. Leave the field blank to search for facilities regardless of their association with a flight watch station.
- **Tie-in Facility** - Enter the 3-character code for the tie-in flight service station associated with the location identifier for which you are searching.
- **Controlling Center** - Enter the 3-character code for the controlling center of the location identifier.

Query Fields: LocID		
Location ID	Facility Name & Type	City, State
<input type="text"/>	<input type="text"/>	<input type="text"/>
FL TWO	Tie-in Facility	Controlling Center
<input type="text"/>	<input type="text"/>	<input type="text"/>

Figure 22: LocID Query Fields

Airway Intersections Database

The Airway Intersections table includes only the unnamed, numbered fixes designated as "AWY INTXN" in the official NFDC Tables pulled from the NFDC CD. The available query fields in the Airway Intersections table are:

- **Airways** - Enter one or more airway codes (i.e. J66) to search for intersection points along the airway(s).
- **Center** - Enter the 3-character code of the numbered fix's controlling center.

Note that there could be more than two airways that intersect at a specified fix because the airways occur at different altitudes, etc.

Query Fields: AWY INTXN	
Airways	Center
<input type="text"/>	<input type="text"/>

Figure 23: Airway Intersections Query Fields

Preferred Arrival Routes Database (FAA Users Only)

Preferred arrival routes were originally derived from the ACES database and are not updated according to the 56-day chart cycle. They are provided in the NFDC Tool as a convenience to FAA users. To search for preferred arrival routes, select the PAR table in the NFDC Tool. The only available query field for the PAR table is:

- **Destination** - Enter the destination for the route. The destination must be a 3-character United States airport code (for example BWI for Baltimore-Washington International Airport).

Search Shortcuts

When you perform a search, you may have only limited information to enter in the query fields. Or you may want to search for records that meet more than one parameter for a query field. Or perhaps you want to exclude routes that contain specific parameters. There are certain shortcuts that can help you when you are looking for a particular set of records or only have limited information.

Search shortcuts work in all search windows of RMT: CDR Tool, ANR Tool, and the NFDC Tool. Please note that the search shortcuts can be used in conjunction with one another and/or multiple times in a query field.

Include a Group of Airports for the Same Metropolitan Area

A metropolitan area is often served by more than one airport. To enable you to search for routes for all airports in a metropolitan area, RMT utilizes airport aliases, which serve as a shortcut to having to type in several airports in a search field. For example, airports that serve the New York City metropolitan area are all included in the alias "NYMetro." Currently, the "NYMetro" alias includes LGA, JFK, and EWR.

The Reroute Advisory Team (RAT) has done a significant amount of work to standardize terms used in advisories. The RAT group is currently finalizing a list of standard airport group aliases that can be used in RMT searches. The complete list of aliases will be added to this guide when they are available.

You can still use "or" and "not" logic in conjunction with the aliases. For example, if you want to find flights departing from DCMetro airports with the exception of BWI, enter "DCMetro !BWI" in the Origin/Dep Center field. The example in Figure 24 illustrates the airport alias logic in the Origin/Dep Center field and the "OR" logic in the Dest/Arr Center field. The user is looking for routes that originate from any airport in the NY Metropolitan area and arrive at either BOS or PHL airports.

CDR Tool

CDR EFFECTIVE 0901Z **21 Feb 2002** **CDR**
TO 0901Z **18 Apr 2002**

Query Fields: Operational

Route Code: Origin/Dep Center: Dest/Arr Center: Traversed Centers: Departure Fix: Mod Date/Time:

Route String: Remarks: ModFlag:

Database

☒ Operational
☐ Staging

Query Results: Operational

ModTime	RCode	Dest	Orig	Route String	Dep
02/21/2002...	EWBOS95	KBOS	KEWR	KEWR GAYEL J95 STOMP J63 HNK ALB GDM GDM2 KBOS	GAYEL
02/21/2002...	EWBOSPH	KBOS	KEWR	KEWR MERIT ORW ORW2 KBOS	MERIT
02/21/2002...	EWBOSSC	KBOS	KEWR	KEWR MERIT HFD SCUPP2 KBOS	MERIT
02/21/2002...	EWBOSSH	KBOS	KEWR	KEWR DIXIE V276 PREPI OWENZ FLUTE TUK ACK LFV SCUPP KBOS	DIXIE
02/21/2002...	JFKBOS95	KBOS	KJFK	KJFK GAYEL J95 STOMP J63 HNK ALB GDM GDM2 KBOS	GAYEL
02/21/2002...	JFKBOSPH	KBOS	KJFK	KJFK MERIT ORW ORW2 KBOS	MERIT
02/21/2002...	JFKBOSSC	KBOS	KJFK	KJFK MERIT HFD SCUPP2 KBOS	MERIT
02/21/2002...	JFKBOSSH	KBOS	KJFK	KJFK SHIPP FLUTE TUK ACK LFV SCUPP KBOS	SHIPP
02/21/2002...	LGABOS95	KBOS	KLGA	KLGA GAYEL J95 STOMP J63 HNK ALB GDM GDM2 KBOS	GAYEL
02/21/2002...	LGABOSPH	KBOS	KLGA	KLGA MERIT ORW ORW2 KBOS	MERIT
02/21/2002...	LGABOSSC	KBOS	KLGA	KLGA MERIT HFD SCUPP2 KBOS	MERIT
02/21/2002...	LGABOSSH	KBOS	KLGA	KLGA SHIPP FLUTE TUK ACK LFV SCUPP KBOS	SHIPP
02/21/2002...	PHLBOS95	KBOS	KPHL	KPHL PTW PTW320 V499 CFB V270 DNY ALB GDM GDM2 KBOS	PTW
02/21/2002...	PHLBOSPH	KBOS	KPHL	KPHL DITCH J225 JFK ORW2 KBOS	DITCH
02/21/2002...	PHLBOSPL	KBOS	KPHL	KPHL DITCH V312 DRIFT V308 ORW V16 WOONS KBOS	DITCH
02/21/2002...	PHLBOSPT	KBOS	KPHL	KPHL PTW PTW320 J64 RAV FQM DNY ALB GDM GDM2 KBOS	PTW
02/21/2002...	PHLBOSSC	KBOS	KPHL	KPHL DITCH J225 JFK HFD SCUPP2 KBOS	DITCH

18 records

Figure 24: Example Using NYMetro in the Origin Field

Use a Wildcard to Enter a Partial Parameter

A wildcard character is used to take the place of a specific character in a search parameter. Wildcards are good to use when you have only partial information or want to view routes whose parameters may share some characters in common. Please note that wildcards *do not* work when entering center codes (i.e. ZDC). You must always type the specific 3-character center code in your search parameters. RMT recognizes the asterisk (*) and the question mark (?) as wildcard characters.

Using the Asterisk as a Wildcard

You can use the asterisk in a search field to broaden or narrow your search results, depending on the field.

Many search fields require you to enter a specific code in order to obtain search results. For example, you cannot simply enter "O" into the Origin or Destination fields because "O" is not recognized as an airport or center code. You must type in the three-character code in order to conduct a search based on origin or destination. In these types of fields, a single asterisk replaces an *unlimited amount* of characters in a search parameter. When you use an asterisk in a search parameter, the search results include routes whose elements match the specific characters in the parameter plus any additional characters either before or after, depending on where you place the

asterisk. For example, to search for routes that arrive at any airport whose abbreviation begins with "O," type "O*" into the Destination/Arr Center search field. The search will yield routes whose destination begins with an "O" (Figure 25).

However, you can enter partial information in other search fields to achieve search results that contain any or all of the information you entered. For example, if you enter "J1" in the Route String field, your search results will include any route records that include the element J1. This would include not only route records with J1, but also J15, J18, J110, etc. In these types of fields, you can use the asterisk to filter parameters. For example, if you enter WISKE in the route string field, your search will yield all route records with an element matching WISKE, including WISKE2 or WISKE3 if these elements exist. To limit your search results to those route records with only WISKE in the route string, you can place asterisks on either end of the element name and put a blank space between the asterisk and any element characters (* WISKE *). This tells the database that there should be no characters on either end of WISKE in any search results (Figure 26).

NFDC Tool

NFDC EFFECTIVE 0901Z **13 Jun 2002** **NFDC**
TO 0901Z **08 Aug 2002**

Query Fields: PrefRoutes

Origin/Dep Center	Destination/Arr Cen...	Route Type	Area
	O*		

Route String **Altitude** **Aircraft Types** **Direction**

NFDC Tables

- PrefRoutes
- LocID
- PARs
- AWY INTXN

Query Results: PrefRoutes

Orig	Route String	Dest	Hours1	Hours2	Hours3	
ABQ	ABQ J18 GCK J96 IRK BRADFORD-STAR ORD	ORD	1100-0400			H
ACK	ACK V146 PUT ORH	ORH				T
ACK	ACK FREDO OWD	OWD				T
ACY	ACY V1 JFK V229 BDR MAD V475 V188 TMU OQU	OQU				T
ACY	ACY V1 JFK V229 HFD V1 GRAYM ORH	ORH				T
AJO	AJO PDZ V186 V458 OCN OKB	OKB				T
AJO	AJO PDZ V186 FIM OXR	OXR				T
ALB	ALB SYR J63 EHMAN YXU J547 PMM PULLMAN-...	ORD	1100-0300			H
ALB	ALB V130 MOIDS ORH	ORH				T

455 records

Figure 25: Search Using O* in the Destination/Arr Center Field

CDR Tool

CDR EFFECTIVE 0901Z 18 Apr 2002 TO 0901Z 13 Jun 2002 **CDR**

Query Fields: CDR Operational

Route Code Origin/Dep Cen... Dest/Arr Center Traversed Cen... Departure Fix Mod Date/Time

Route String Remarks ModFlag

* WISKE *

Query Clear Cancel Send To Map

Database

☒ CDR Operational

☐ CDR Staging

Query Results: CDR Operational

ModTime	RCode	Orig	Dest	Route String
04/18/2002...	CLEPITS1	KCLE	KPIT	KCLE DJB APE CTW V443 WISKE WISKE2 KPIT
04/18/2002...	CLTPITPR	KCLT	KPIT	KCLT NALEY HVQ JPU V117 WISKE WISKE2 KPIT
04/18/2002...	EWRAJCJ6	KEWR	KAGC	KEWR PARKE J6 HVQ JPU V117 WISKE KAGC
04/18/2002...	EWRPITJ6	KEWR	KPIT	KEWR PARKE J6 HVQ JPU V117 WISKE KPIT
04/18/2002...	HPNAGCJ6	KHPN	KAGC	KHPN PARKE J6 HVQ JPU V117 WISKE KAGC
04/18/2002...	HPNPITJ6	KHPN	KPIT	KHPN PARKE J6 HVQ JPU V117 WISKE KPIT
04/18/2002...	IAHPIT1N	KIAH	KPIT	KIAH LFKN2 LFK J29 ELD J29 ROD J152 TRAKK J30 J110 AIR WISKE WISK
04/18/2002...	JFKAGCJ6	KJFK	KAGC	KJFK RBV J230 SAAME J6 HVQ JPU V117 WISKE KAGC
04/18/2002...	JFKPITJ6	KJFK	KPIT	KJFK RBV J230 SAAME J6 HVQ JPU V117 WISKE KPIT
04/18/2002...	LGAAGCJ6	KLGA	KAGC	KLGA PARKE J6 HVQ JPU V117 WISKE KAGC

17 records

Select All Deselect All

Figure 26: Search Using "* WISKE *" in the Route String

Using the Question Mark as a Wildcard

A single question mark (?) replaces *only one* character in a search parameter. If you do not know a letter in a parameter, you can replace it with a single question mark. The search will yield those routes with parameters that match the specific characters you type in and have an additional character where the question mark appears. If you want to replace more than one character in a parameter, you must type a single question mark for *each* character you are replacing. For example, if you want to search for routes originating from ORD and arriving at BOS using a single field, use the route code field and insert "???" for the 2-character route designator at the end of the code (Figure 27). The question mark works best in specific code-based fields (i.e. Route Code, Origin/Dep Center, Destination/Arr Center, etc.).

CDR Tool

CDR EFFECTIVE 0901Z **21 Feb 2002** **CDR**
TO 0901Z **18 Apr 2002**

Query Fields: Operational

Route Code: ORDBOS?? Origin/Dep Cent...Dest/Arr Center: Traversed Cent...Departure Fix: Mod Date/Time:

Route String: Remarks: ModFlag:

Query Clear Cancel Send To Map

Database

☒ Operational
☐ Staging

Query Results: Operational

ModTime	RCode	Dest	Orig	Route String
02/21/2002...	ORDBOS0E	KBOS	KORD	KORD ELX CRL J554 JHW J82 ALB GDM GDM2 KBOS
02/21/2002...	ORDBOS1N	KBOS	KORD	KORD PETTY MKG ECK J16 ALB GDM2 KBOS
02/21/2002...	ORDBOS2S	KBOS	KORD	KORD EON WORDY FWA J64 J29 JHW J82 ALB GDM2 KBOS
02/21/2002...	ORDBOS3S	KBOS	KORD	KORD EON DNV TTH IJU J526 BKW J42 RBV J222 JFK ORW2 KBOS
02/21/2002...	ORDBOS4N	KBOS	KORD	KORD PETTY TVC NOTAP DEMKO MUPUX KIXIR LIMRE ENE SCUPP KBOS
02/21/2002...	ORDBOS5N	KBOS	KORD	KORD PETTY PECOK ASP J522 KLANT YEE ART ART141 GFL295 GFL ENE
02/21/2002...	ORDBOS6N	KBOS	KORD	KORD PETTY PECOK ASP VIXIS PENDO SIBKI TULEG ENE SCUPP KBOS
02/21/2002...	ORDBOS7N	KBOS	KORD	KORD BAE GRB SAW SSM YYB YMWV M8S ENE SCUPP KBOS
02/21/2002...	ORDBOS8N	KBOS	KORD	KORD BAE GRB SAW SSM J500 BILPA TULEG ENE SCUPP KBOS

9 records Select All Deselect All

Figure 27: Search Using "ORDBOS??" in the Route Code Field

Use "Or" to Include More than One of the Same Parameter

You can include multiple search parameters in any input field to search for routes that meet either parameter. That is, the search results will yield all routes with route information that matches either parameter typed into an input field. Use RMT's "or" logic to enter more than one parameter for a single query field. RMT recognizes the pipe (|) symbol as meaning "or" in your search. The results from a search using "or" will include only those routes that include the specific parameters that you typed into an input field and no others.

CDR Tool

CDR EFFECTIVE 0901Z 18 Apr 2002
TO 0901Z 13 Jun 2002 **CDR**

Query Fields: CDR Operational

Route Code Origin/Dep Cen... Dest/Arr Center Traversed Cen... Departure Fix Mod Date/Time

PHL | BOS

Route String Remarks ModFlag

Query Clear Cancel Send To Map

Database

☒ CDR Operational
☐ CDR Staging

Query Results: CDR Operational

ModTime	RCode	Orig	Dest	Route String
04/18/2002...	BOSACYPJ	KBOS	KACY	KBOS LUCOS SEY067 SEY HTO J121 BRIGS KACY
04/18/2002...	BOSACYPP	KBOS	KACY	KBOS LUCOS SEY067 SEY V268 BRIGS KACY
04/18/2002...	BOSADWM7	KBOS	KADW	KBOS NELIE CMK J75 MXE V378 BAL KADW
04/18/2002...	BOSADWPJ	KBOS	KADW	KBOS LUCOS SEY067 SEY HTO J174 ATR085 ATR V308 OTT KADW
04/18/2002...	BOSADWPP	KBOS	KADW	KBOS LUCOS SEY067 SEY HTO V308 OTT KADW
04/18/2002...	BOSAGSPJ	KBOS	KAGS	KBOS NELIE CMK J75 GVE J37 SPA KAGS
04/18/2002...	BOSAKRPJ	KBOS	KAKR	KBOS GLYDE CTR HNK J49 PSB PSB292 YNG V72 ACO KAKR
04/18/2002...	BOSAPFPJ	KBOS	KAPF	KBOS NELIE CMK J75 GVE J75 TEPEE ZEILR1 KAPF
04/18/2002...	BOSATLPJ	KBOS	KATL	KBOS GLYDE BAF J77 PTW J48 ODF MACEY2 KATL
04/18/2002...	BOSATLT7	KBOS	KATL	KBOS LUCOS SEY067 SEY HTO J174 ORF J121 ISO FLO J4 IRQ SINCA3 K

799 records

Select All Deselect All

Figure 28: Search Using the "Or" Logic in the Origin/Dep Center Field

For example, in Figure 28, the user searched for routes that originated from PHL *or* BOS airports. Note that you can leave out the space between the pipe and the airport codes (PHL|BOS). The search results include only those routes that originated at PHL or BOS.

Use "And" to Combine Multiple, Different Parameters

The "and" logic is primarily used in the route string field. Route strings are made up of the actual route elements, including nav aids, jet routes, and fixes. To search for routes that include all the multiple, different elements you specify, use RMT's "and" logic. RMT recognizes the ampersand (&) as "and" in a search.

CDR Tool

CDR

EFFECTIVE 0901Z 21 Feb 2002
TO 0901Z 18 Apr 2002

CDR

Query Fields: Operational

Route Code
Origin/Dep Cent...Dest/Arr Center
Traversed Cent...Departure Fix
Mod Date/Time

Route String
Remarks
ModFlag

Database
☒ Operational
☐ Staging

Query Results: Operational

ModTime	RCode	Dest	Orig	Route String
02/21/2002...	CVGMKEJB	KMKE	KCVG	KCVG JODUB2 JODUB APE FDY PMM V170 PETTY KMKE
02/21/2002...	CVGMKENT	KMKE	KCVG	KCVG FFO FWA PMM V170 PETTY KMKE
02/21/2002...	CVGMKENW	KMKE	KCVG	KCVG WHWTR3 BVT CGT CGT007 V170 PETTY KMKE
02/21/2002...	CVGMKERK	KMKE	KCVG	KCVG ROCKT1 ROCKT FDY PMM V170 PETTY KMKE
02/21/2002...	MDWACY1N	KACY	KMDW	KMDW PETTY MKG FNT CXR JST HAR DQO ENO SIE KACY
02/21/2002...	MDWADW1N	KADW	KMDW	KMDW PETTY TVC ASP J522 EXTOL J59 PSB J61 EMI BAL KADW
02/21/2002...	MDWBDL1N	KBDL	KMDW	KMDW PETTY MKG ECK J16 BUF AUDIL SWEDE1 KBDL
02/21/2002...	MDWBDL3N	KBDL	KMDW	KMDW PETTY TVC NOTAP DEMKO MUPUX KIXIR RKA SWEDE1 KBDL
02/21/2002...	MDWBDL4N	KBDL	KMDW	KMDW PETTY PECOK ASP J522 KLANT YEE ART RKA SWEDE1 KBDL
02/21/2002...	MDWBDL5N	KBDL	KMDW	KMDW PETTY PECOK ASP VIXIS PENDO SIBKI TULEG RKA SWEDE1 KBDL

215 records

Figure 29: A Search with “PETTY” in the Route String

In Figure 29 above, the user conducted a search for routes with only the fix PETTY entered in the route string. Note that a variety of routes with different origins and destinations contain PETTY in the route string.

CDR Tool

CDR EFFECTIVE 0901Z **21 Feb 2002** **CDR**
TO 0901Z **18 Apr 2002**

Query Fields: Operational

Route Code Origin/Dep Cent...Dest/Arr Center Traversed Cent...Departure Fix Mod Date/Time

Route String Remarks ModFlag

PETTY&CVG

Query Clear Cancel Send To Map

Database

☒ Operational
☐ Staging

Query Results: Operational

ModTime	RCode	Dest	Orig	Route String
02/21/2002...	CVGMKEJB	KMKE	KCVG	KCVG JODUB2 JODUB APE FDY PMM V170 PETTY KMKE
02/21/2002...	CVGMKENT	KMKE	KCVG	KCVG FFO FWA PMM V170 PETTY KMKE
02/21/2002...	CVGMKENW	KMKE	KCVG	KCVG WHWTR3 BVT CGT CGT007 V170 PETTY KMKE
02/21/2002...	CVGMKERK	KMKE	KCVG	KCVG ROCKT1 ROCKT FDY PMM V170 PETTY KMKE
02/21/2002...	MDWCVG4N	KCVG	KMDW	KMDW PETTY MKG SVM DJB APE CINCE4 KCVG
02/21/2002...	ORDCVG4N	KCVG	KORD	KORD PETTY MKG SVM DJB APE CINCE4 KCVG

6 records

Select All Deselect All

Figure 30: A Search with "PETTY&CVG" in the Route String

In Figure 30 above, the user searched for routes with PETTY and CVG to create a more specific search using the route string field. Note that conducting this search yields only those routes with PETTY and CVG in the route string. Note that this has narrowed the query results.

CDR Tool

CDR EFFECTIVE 0901Z **21 Feb 2002** **CDR**
TO 0901Z **18 Apr 2002**

Query Fields: Operational

Route Code Origin/Dep Cent...Dest/Arr Center Traversed Cent...Departure Fix Mod Date/Time

Route String Remarks ModFlag

PETTY&CVG&MKE

Query Clear Cancel Send To Map

Database

☒ Operational
☐ Staging

Query Results: Operational

ModTime	RCode	Dest	Orig	Route String
02/21/2002...	CVGMKEJB	KMKE	KCVG	KCVG JODUB2 JODUB APE FDY PMM V170 PETTY KMKE
02/21/2002...	CVGMKENT	KMKE	KCVG	KCVG FFO FWA PMM V170 PETTY KMKE
02/21/2002...	CVGMKENW	KMKE	KCVG	KCVG WHWTR3 BVT CGT CGT007 V170 PETTY KMKE
02/21/2002...	CVGMKERK	KMKE	KCVG	KCVG ROCKT1 ROCKT FDY PMM V170 PETTY KMKE

4 records

Select All Deselect All

Figure 31: Search Using "PETTY&CVG&MKE" in the Route String

In Figure 31 above, the user searched for route records with PETTY, CVG, and MKE in the route string. This search is very specific.

You cannot use the "and" logic in all query fields. If you use "and" in a query field that does not utilize that logic, RMT will warn you that you have made an invalid entry. Click OK to close the warning window and return to the RMT Tool in which you were working. Remove the "&" from the field to continue your search. Most likely you have used "and" logic when you want to use "or" logic.

For example, in Figure 32, the user wanted to search for CDRs arriving at BOS or PHL and used the "&" to indicate "and." Note the warning that RMT gives. You cannot find route records that have a destination of BOS *and* PHL because a route can only have one destination. In this case, the user would want to search for routes with a destination of BOS *or* PHL. The user would need to enter "BOS|PHL" to get the desired search results.

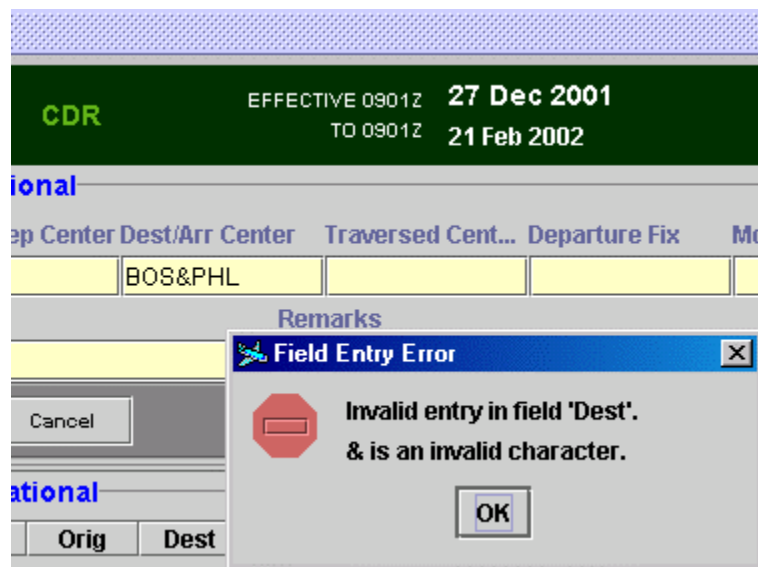


Figure 32: Warning When Using "&" In an Invalid Field

Use "Not" to Exclude Routes

Use RMT's "not" logic to exclude routes that include particular parameters. RMT recognizes the exclamation mark (!) as the symbol for "not." For example, you might want to search for routes out of a particular airport and know that you cannot use a particular fix out of the airport. In this case, you would want to search for all routes out of the airport that do not use that particular fix. You can use the "not" logic multiple times in one search to narrow your search even further. Just type in the parameters you want excluded from resulting routes, using an exclamation mark between each element code.

CDR Tool

CDR EFFECTIVE 0901Z **18 Apr 2002** **CDR**
TO 0901Z **13 Jun 2002**

Query Fields: Staging

Route Code: Origin/Dep Cent...Dest/Arr Center: Traversed Cent...Departure Fix: Mod Date/Time:

Route String: Remarks: ModFlag:

Database

☐ Operational

☒ **Staging**

Query Results: Staging

ModTime	RCode	Dest	Orig	Route String
03/06/2002...	38WS101N	KS10	K38W	K38W ANTLR KS10
01/16/2002...	ABQBWICE	KBWI	KABQ	KABQ CNX J15 CME FST J86 IAH J2 CEW AMG CAE J52 RIC OTT5 KB
01/16/2002...	ABQBWICP	KBWI	KABQ	KABQ LVS J18 SLN J24 MCI J80 CAP IJU J526 BKW J147 CSN OTT5 K
01/16/2002...	ABQBWIJ1	KBWI	KABQ	KABQ ALS J13 FQF J128 HCT J60 JOT J30 APE AIR J162 MGW EMI3 K
01/16/2002...	ABQBWIJ2	KBWI	KABQ	KABQ ALS PUB J64 BDF J26 JOT J30 APE AIR J162 MGW EMI3 KBWI
01/16/2002...	ABQBWILL	KBWI	KABQ	KABQ LVS J8 BGD GAG PER SGF J98 FAM J78 IJU J526 BKW J147 CS
01/16/2002...	ABQBWIM1	KBWI	KABQ	KABQ CNX J15 INK J4 MGM J37 SPA J14 RIC OTT5 KBWI
01/16/2002...	ABQBWIM2	KBWI	KABQ	KABQ CNX J15 CME FST J86 IAH J2 LCH J590 MGM J37 SPA J14 RIC
01/16/2002...	ABQBWIM3	KBWI	KABQ	KABQ CNX J15 CME FST J86 IAH J2 LCH J590 MGM J40 J75 CAE J52

13601 records

Figure 34: Search Routes in Staging Database to be Copied to Operational

To search for routes in the staging database that will be copied to the operational database, you could perform a search using "ID" in the ModFlag field. This would exclude routes that are marked for deletion and will not show up in the operational database in the next cycle.

Run the Search

Once you enter your search criteria, press **Enter** on your keyboard or click the **Query** button on the appropriate RMT Tool to perform the search. The Tool will search its database for those routes that match your parameters. Once the search is completed, you will see the results in the Query Results section of the Tool.

Clear Your Search

To clear your search parameters and any query results, click the **Clear** button. This should clear any information and allow you to start a new search. You can use the Clear button before you run a search to clear all query fields. This is useful when you decide not to run a search or decide you need entirely new search parameters. However, only use the Clear button if you want to erase information in *all* your query fields. The Clear button does not work to clear individual query fields.

Cancel Your Search

If a search is taking a long time to run, you may cancel the search at any time. Click the **Cancel** button to interrupt the search and start a new search.

View Search Results

The Query Results Section

Once your search is complete, any records that match the search criteria will appear in the *Query Results* section of the RMT Tool in which you are working. The Query Results section is a table listing the records. Each record is listed on its own row, with several columns to separate specific information.

The columns that appear in the Query Results table directly correspond with the Query Fields. You can choose to show or hide specific columns, as well as change their size and the order in which they are displayed. To read about these customization options, see *Customize the Query Results Section* on page 44.

Query Results in the CDR Tool

Query Results: Operational				
ModTime	RCode	Orig	Dest	Route String
01/25/2002...	ACKPHLD1	KACK	KPHL	KACK LFV BOS CTR DNY MAZIE1 KPHL
01/25/2002...	ACKPHLPJ	KACK	KPHL	KACK SEY HTO J121 BRIGS VCN7 KPHL
01/25/2002...	ALBPHLPJ	KALB	KPHL	KALB DNY MAZIE1 KPHL
01/25/2002...	ALBPHLT2	KALB	KPHL	KALB BDL HTO J121 BRIGS VCN7 KPHL
01/25/2002...	ATLBOS9N	KATL	KBOS	KATL NOTWO J91 VxV HVQ J78 PSB J49 ALB GDM2 KBOS
01/25/2002...	ATLBOS9S	KATL	KBOS	KATL SOONE MCN DBN CAE J52 RDU J207 FKN J79 JFK ORW2 KBOS
01/25/2002...	ATLBOSPR	KATL	KBOS	KATL EATWO GRD J209 RDU J207 FKN J79 JFK ORW2 KBOS
01/25/2002...	ATLPHL7S	KATL	KPHL	KATL SOONE MCN DBN CAE J51 FAK DPNT4 KPHL
01/25/2002...	ATLPHL8N	KATL	KPHL	KATL NOTWO J91 VxV J91 J42 GVE DPNT4 KPHL
01/25/2002...	ATLPHLPR	KATL	KPHL	KATL EAONE SPA J14 J51 FAK DPNT4 KPHL
01/25/2002...	BDLPHLD1	KBDL	KPHL	KBDL CTR DNY MAZIE1 KPHL
01/25/2002...	BDLPHLPJ	KBDL	KPHL	KBDL CSTL2 SHERL J121 BRIGS VCN7 KPHL
01/25/2002...	BDRPHLPJ	KBDR	KPHL	KBDR BEADS V139 BRIGS V577 VCN VCN7 KPHL

Figure 35: Query Results in the CDR Tool

You can view the following information columns in the CDR Tool Query Results table.

- **ModTime** - The date and time the route record was created or modified.
- **RCode** - The route code for the coded departure route. The route code is an 8-character route designator that consists of the 3-character origin airport, 3-character destination airport, and 2-character facility designation code.
- **Orig** - The origin airport of the coded departure route.
- **Dest** - The destination airport of the coded departure route.
- **DepFix** - The departure fix.
- **Route String** - The actual route elements (airports, nav aids, fixes, jet routes) that make up the coded departure route.
- **DCNTR** - The departure center of the origin airport.
- **ACNTR** - The arrival center of the destination airport.
- **TCNTRs** - Any centers through which the CDR traverses. Note that centers are listed alphabetically, not geographically along the route.
- **Mod Flag** - A flag used to indicate any changes made to the route record since the last chart date. 'M' indicates a modified route. 'N' indicates a new route. 'D' indicates a deleted route. '-' indicates an unchanged route.

- **Mod Init** - This field is specifically for FAA users. The FAA-assigned initials of the person who modified the route record.
- **Mod User** - This field is specifically for FAA users. The user type of the person who modified the route record.
- **Remarks** - Any remarks associated with the route record.

Query Results in the ANR Tool

You can view the following information columns in the ANR Tool Query Results table.

- **ModTime** - The date and time the ANR record was created or modified.
- **RCode** - The route code for the advanced navigation route. The route code is an 8-character route designator that consists of 2-character facility designated code, 3-character departure airport, and 3-character arrival airport.
- **Orig** - The origin airport of the advanced navigation route.
- **Dest** - The destination airport of the advanced navigation route.
- **Route String** - The actual route elements (airports, nav aids, fixes, jet routes) that make up the advanced navigation route.
- **Altitude** - The altitude of the advanced navigation route.
- **AddlInfo** - Additional information about the route. This may include a list of aircraft types that cannot utilize the route or other pertinent information that does not fit in another field.
- **Remarks** - Any remarks associated with the route record.
- **Aircraft** - The type of aircraft that can utilize the route: jet, turbo, or prop.
- **EffTime** - The effective times for the route. ANRs are often only usable during certain hours of the day. Note that times given are GMT.
- **DCNTR** - The departure center of the advanced navigation route.
- **ACNTR** - The arrival center of the advanced navigation route.
- **TCNTRs** - The centers through which the ANR route traverses. Note that centers are listed alphabetically, not geographically along the route.
- **ModFlag** - A flag used to indicate any changes made to the route record since the last chart date. 'M' indicates a modified route. 'N' indicates a new route. 'D' indicates a deleted route. '-' indicates an unchanged route.
- **ModInit** - This field is specifically for FAA users. The FAA-assigned initials of the person who modified the route record.
- **ModUser** - This field is specifically for FAA users. The user type of the person who modified the route record.

Query Results for Preferred Routes

When you perform a search using the NFDC Tool's PrefRoutes table, you can view the following columns.

- **Origin** - The route's origin airport.
- **Route String** - The elements that make up the route.
- **Destination** - The route's destination airport.
- **Hours 1** - The effective times (GMT) for the route. Effective times are those hours during which the route can be flown.
- **Hours 2** - The effective times (GMT) for the route. Effective times are those hours during which the route can be flown.
- **Hours 3** - The effective times (GMT) for the route. Effective times are those hours during which the route can be flown.

- **Type** - Specifies the route type. Route types are: **L** - low altitude; **H** - high altitude; **LSD** - low altitude single direction; **HSD** - high altitude single direction; **SLD** - special low altitude directional; **SHD** - special high altitude directional; **TEC** - tower en route control.
- **Area** - The preferred route area description.
- **Altitude** - The preferred route altitude description.
- **Aircraft** - The aircraft types that can use this route are listed in this column.
- **Direction** - The route direction limitations description.
- **Seq** - Route identifier sequence number. This is the number of preferred routes between a city pair.
- **DCNTR** - The route's departure center.
- **ACNTR** - The route's arrival center.

Query Results for Location IDs

When you perform a search using the NFDC Tool's LocID table, you can view the following columns.

- **LocID** - The 3-character location identifier code. The location identifier can represent more than one facility.
- **Facility Name & Type** - The facility name and type. For example, facilities can be airports, nav aids, or ILS.
- **Location** - The city and state location of the facility.
- **FL TWO** - Indicates whether the facility is a flight watch station indicator. Y indicates "yes." A blank column indicates "no."
- **Tie-in Facility** - The 3-character code for the tie-in flight service station associated with the location identifier.
- **Center** - The 3-character code for the controlling center of the location identifier.

Query Results for Airway Intersections

You can view the following information columns in the Airway Intersections table.

- **Airways** - The airways that intersect at the numbered fix.
- **Center** - The controlling center of the fix.
- **Latitude** - The latitude at which the airway intersection occurs.
- **Longitude** - The longitude at which the airway intersection occurs.
- **Fix Name** - The unnamed, numbered fix at which the airway intersection occurs.

Query Results for Preferred Arrival Routes (FAA Users Only)

When you perform a search using the NFDC Tool's PARs table, you can view the following columns. Note that the first row in the query results contains a list of the STARS for the specified airport. The following lines list the elements of the specific PARs.

- **Destination** - The route's destination airport
- **PAR** - The PAR route string.
- **Seq** - A sequence number inserted for sorting purposes.

Customize the Query Results Section

You can customize the Query Results section in any RMT Tool to suit your needs. That is, you can choose which columns to display, column size and order, and how route records are sorted.

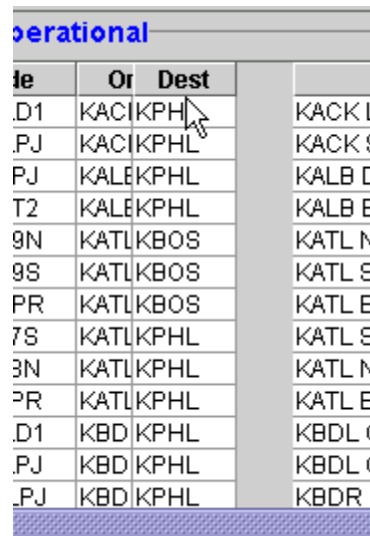
Sort Records

Double-click any column header to sort records in ascending order according to the column selected. To view a descending sort of the same field, simply double-click on the column header again.

You can sort according to three different columns simultaneously in this manner. To sort records according to more than one column, sort from the least to most important column header. For example, if route destination is the column by which you want your routes primarily sorted, sort that column after you have sorted any other column.

Change Column Order

To rearrange column order, simply click and drag the column header you wish to move to the desired location. The moved column will drop in place and the other columns move accordingly when you release the mouse.

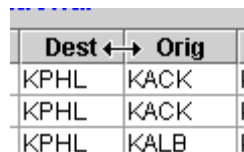


File	Orig	Dest
.D1	KACIKPH	KACKL
.PJ	KACIKPHL	KACKS
PJ	KALEKPHL	KALB C
T2	KALEKPHL	KALB E
9N	KATLKBOS	KATL N
9S	KATLKBOS	KATL S
PR	KATLKBOS	KATL E
7S	KATLKPHL	KATL S
3N	KATLKPHL	KATL N
PR	KATLKPHL	KATL E
.D1	KBD KPHL	KBDL C
.PJ	KBD KPHL	KBDL C
.PJ	KBD KPHL	KBDR I

Figure 36: Moving the Dest Column Left

Resize Columns

To resize a column in the Query Results table, place your cursor on the line between two columns. When the cursor becomes a double arrow, click and drag the border to the desired width.



Dest	Orig
KPHL	KACK
KPHL	KACK
KPHL	KALB

Figure 37: Resizing Columns

Eliminate and Add Columns

To eliminate or add columns, select **Settings > Show/Hide Table Columns**. This brings up the Results Table Options window, which lists all the columns that you can display in the Tool (Figure 38). Any column name with a checkmark in the box next to it will be displayed in the Query Results section. To eliminate a column, click the box next to the column name in the Results Table Options window to remove the checkmark. Similarly, to add a column, click the box next to the column name in the Results Table Options window to make a checkmark appear.



Figure 38: Show/Hide Columns Options

Save Your Settings

Once you customize the Query Results section of any RMT Tool, you probably want to save those display settings for your next RMT session. RMT allows you to manually save any modifications made to the Tool displays. Select **Settings > Save Settings**. This will save the display settings to your local configuration file so that the Tool will open in RMT exactly as you closed it.

Export Query Results

Query results can be exported to a number of formats. You can send query results to the map to view a graphic display of the results. You can export any records that appear in your query results to a comma-delimited text file by either using the **Save** or **Copy to Clipboard** functions. You can also send your search results to a printer by using the **Print** function. Note that only the columns that appear in the Query Results section of an RMT Tool are saved, copied, or printed. When exported, the columns will appear in the same order as they are displayed in Query Results. Remember that you can customize the Query Results display so that the exported product appears as you want.

Selecting Records in the Query Results Table

To export records from the Query Results section of any RMT tool, you must select the records you wish to export.

To select records, you can ctrl-click on individual records, click and drag across a range of records, or click a single record and then shift-click another record to choose the entire range. If you make a mistake when selecting records, click the **Deselect All** button to clear your selections and start over. Likewise, if you decide during your selection process that you want to select all the records, click the **Select All** button in the Tool to highlight all the records. Note that by default, if you do not select any records, all records will be selected.

Any record(s) you select should be highlighted.

Send Query Results to the RMT Map

The RMT Map allows you to see graphical representations of coded departure routes, advanced navigation routes, preferred routes, and airway intersections. Note that you cannot view location identifiers on the map. To view any records in the Query Results section of an RMT Tool on the RMT Map, you must first select the records to be displayed. Click the **Send to Map** button. Note that if you have more than one RMT Map window open, the records you select will be displayed in all map windows. To see the records on the map, click the title bar of the RMT Map window or select **Window > RMT Map** to bring the map window forward. To learn more about the map display, see The RMT Map on page 53.

Save Search Results

To save your search results as a text file, select the records you wish to save.

Any record(s) you select should be highlighted. Once you choose which records to save, select **File > Save to File**. Choose the file name and location for your text file. Because the file is simple, comma-delimited text, it is easy to export to another format, such as Microsoft Excel.

Copy Search Results

To copy your search results and paste the results into another program select the records you wish to copy.

Any record(s) you select should be highlighted. Once you choose which records to copy, select **File > Copy to Clipboard**. The copied records can then be pasted into another program. Open the program you want to use to view the records. In the new program, click ctrl + V (Windows or NT) or select the program's paste function. The paste function should work correctly in most text editing, word processing, or spreadsheet programs. However, you may run into a program that does not display the copied and pasted text correctly.

Print Search Results

To print your search results select the records you wish to print.

Any record(s) you select should be highlighted. Once you choose which routes to print, select **File > Print**. Note that the printed columns are sized so that they fit all the column information,

regardless of the column size in your Tool display. To maximize the amount of information you print on a single page, Windows users can select the **Properties** button from the print window and select the Landscape option to print the records lengthwise on a page (Figure 39). You can also choose to show or hide columns in the Query Results section to reduce the amount of printed information. When the rows are longer than a printed page will allow, the information will continue on another page.

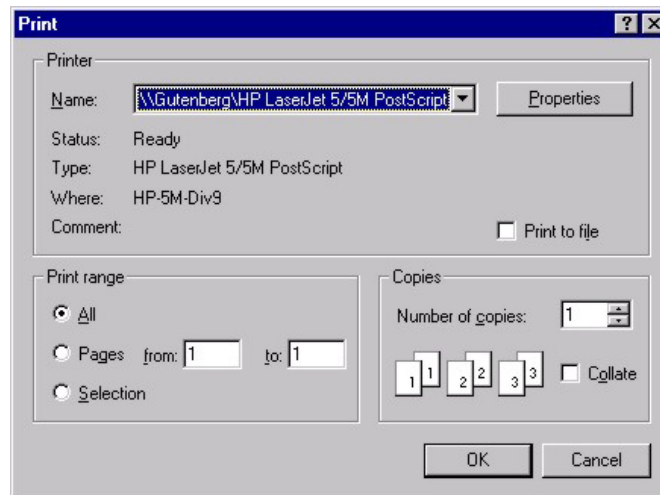


Figure 39: Print Window for Windows NT Users

Reports

Changes for Next Cycle

The **Changes for Next Cycle** report compares route records that appear in the staging database with those in the operational database and checks for differences in the route string. Only those routes with changes to their route string will appear in the report. Route records with changes to other fields (for example, changes to the remarks field) will not appear in the report. You can compare all the routes in the database or just those routes associated with a particular center.

To view route record modifications since the last chart date, use the CDR or ANR Tool report function. To view the route records that have been modified since the last chart cycle, select **Reports > Changes for Next Cycle**. The Report window appears (Figure 40).

Report - Changes For Next Cycle

The generated report will contain all routes that have changed since the last chart date up through the date that you specify below:

Report Date: 03/06/2002 Reset

The default report date is today's date.
Using today's date will speed up report generation.

Enter a name for the report file.

File Name: / Browse

Select the center(s) and type to be included.

Center: All Centers
ZAB
ZAU
ZBW

Center Type
☒ Departure
☐ Arrival

Progress:

Status: Enter a report date and file name.

OK Cancel

Figure 40: Report Window - Changes for Next Cycle

Use the Report window to specify parameters for your report. Enter information about your report using the following fields, provided in the Report window:

- **Report Date** - Enter the end date (MM/DD/YYYY) for which you want to see the changes. The report will show route record modifications beginning from the last chart date up until the Report Date you specify in the Report Changes window. The default date is the current date. Click the **Reset** button to set the date to the default value, which

is the current date. Note that if you specify another date, processing the report may take longer.

- **Enter a name for the report file** - You can use the Browse button to specify a directory for your report. Once you specify the directory, enter a name for your report.
- **Select Centers** - Select "All Centers" to see the route records modified by every center or select a particular center whose routes interest you. You can only select one center if you do not use the "All Centers" option. Note that all route records are modified by their controlling (departure) center.
- **Center Type** - Click **Departure** or **Arrival** to view modified route records according to either the centers from which they depart or arrive. Route records are modified by their controlling (departure) center.

Click **OK** to run the report. The report is actually a comma-delimited text file that can be opened in a number of applications. When the report is complete, locate the report file in the directory you specified and open it from the appropriate application.

ChangesForNextCycleReport.txt								
A	B	C	D	E	F	G	H	I
Report: Changes For Next Cycle								
Current Date: 2002-02-08 10:37:25								
Chart Date: 2001-12-27 Report Date: 2002-02-08								
Tool: CDR Tool								
Center: All Centers								
New Routes: 633								
Deleted Routes: 121								
Modified Routes: 609								
NoChange Routes: 12357								
Route Code	Old Route String	New Route String						
BEDFFOPJ	-	KBED MHT CAM J547 SYR J29 ROD KFFO						
BOSSJCMS	-	KBOS MHT MSS YMW YYB SSM DLH ABR RAP OCS OAL HYP5 KSJC						
DALEWRM3	-	KDAL DALL6 EIC J4 MGM J40 TWINS CAE J51 FAK DYLIN1 KEWR						
DALLGAWM	-	KDAL DALL6 EIC J4 MGM MGM048138 AHN J208 HPW J191 PXT KORRY1						
DETEWRS1	-	KDET CAVVS VWV APE BKW J42 MOL J24 FAK RIC J14 PXT DYLIN1 KEV						
MSPPHLC6	-	KMSP GEP J21 DLH J140 SSM YYB YMW MSS MSS129 BUGSY J570 ALE						
MVYACYPP	-	KMVY SEY V268 BRIGS KACY						
ORDBOS8N	-	KORD BAE GRB SAW SSM J500 BILPA TULEG ENE SCUPP KBOS						
PHXEWRM2	-	KPHX TFD1 CIE J2 ELP J86 IAH J2 LCH J590 MGM MGM048138 AHN J208						
PTKLGAS1	-	KPTK CAVVS VWV APE HVQ BKW J42 GVE KORRY1 KLGA						
YIPEWRS1	-	KYIP CAVVS VWV APE BKW J42 MOL J24 FAK RIC J14 PXT DYLIN1 KEW						
YIPLGAS1	-	KYIP CAVVS VWV APE HVQ BKW J42 GVE KORRY1 KLGA						
ACKMCOT7	KACK SEY HTO J174 ORF J121 CHS J7-							
HYAMCOT7	KHYA SEY HTO J174 ORF J121 CHS J7-							
MSPBDLVX	KMSP SNINE5 GRB TVC VIXIS PENDO -							
MSPBDLWM	KMSP GEP J21 DLH J140 SSM YYB M5-							
MSPBOSVX	KMSP SNINE5 GRB TVC VIXIS PENDO -							
MSPBOSWM	KMSP GEP J21 DLH J140 SSM YYB YN-							
MSPEWRVX	KMSP SNINE5 GRB TVC VIXIS PENDO -							
ACKHOUY2	KACK LFV BOS MHT CAM J547 SYR J2	KACK LFV BOS MHT CAM J547 SYR J29 PXV J131 LIT J180 TBEND ROKIT						
ACKIAHM2	KACK LFV BOS NELIE CMK J75 GVE J	KACK LFV BOS NELIE CMK J75 GVE J37 SJI STROS3 KIAH						
ACKMCY2	KACK LFV BOS MHT CAM J547 SYR J2	KACK LFV BOS MHT CAM J547 SYR J29 DJB J60 JOT J26 IRK BQS1 KMCI						
ACKPHXA8	KACK LFV BOS BAF J77 SAX J80 AIR J	KACK LFV BOS BAF J77 SAX J80 AIR J110 STL J19 ZUN BUNTR1 KPHX						

Figure 41: Changes for Next Cycle Report Opened in Excel

Header information includes the current, chart, and report date as well as the tool used to generate the report and which centers are included in the report. The report also contains statistics about the number of new, deleted, and modified routes as well as the number of routes that did not change.

The route records in the report are grouped according to status: New, Deleted, and Modified records, and further sorted within these groups according to route code. Three columns appear in the report for each record: **Route Code**, **Old Route String**, **New Route String**. New route records will not have any information in the Old Route String column. Deleted records will not have any information in the New Route String column. Modified records will have information in both the Old Route String and New Route String columns.

The RMT Map

The RMT Map is provided as a reference for you. You can view routes and NAS elements (like jet routes, nav aids, and fixes) graphically on the RMT Map to better determine which route you need during operations. You can view coded departure routes, advanced navigation routes, preferred routes, and airway intersections on the map. The RMT Map has several customization features, including zoom options, overlays, and map preferences.

View Routes on the Map

Sending a route to the map for viewing is an option available in the CDR Tool (coded departure routes), ANR Tool (advanced navigation routes), and NFDC Tool (preferred routes and airway intersections only). When you complete a search in any of these Tools, the records that match your search criteria appear in the Query Results section of the Tool window. In the Query Results section, select the record(s) you wish to view on the RMT Map (see Selecting Records on page 46). The record(s) should be highlighted. Click the **Send to Map** button on the Tool window. Then click to the title bar of the RMT Map window or select **Window > RMT Map** to view the records. Note that when you have more than one RMT Map window open, any records you select will appear in all the RMT Map windows.

Note that Canadian and Mexican locations are not currently included in the Map Tool. Routes that in actuality extend into Canada or Mexico are only displayed to the United States/Canada or United States/Mexico border.

Remove Routes from the Map

You can remove routes from the map display either individually or all at once. To remove a single route or a specific group of routes from the map display, either click a single route or ctrl-click multiple routes on the map display so that the desired routes are highlighted. Press **Delete** on your computer keyboard. The route(s) should disappear. This works on any route displayed on the map, including CDRs, ANRs, preferred routes, and user-designed miscellaneous routes.

To remove all routes displayed on your map, select **View > Clear Routes** or **right-click** on the map and select **Clear Routes**. Your map display should clear all routes on the map, including coded departure routes, advanced navigation routes, preferred routes, and user-designed miscellaneous routes.

Remove Airway Intersections from the Map

An airway intersection is a type of "fix" on the map. To delete the airway intersections you can choose to hide all fixes on the map (see Using Show/Hide Overlays on page 56 for more information). Or, if airway intersections are the last overlay you sent to the map, return to the NFDC Tool and clear your airway intersection search by clicking the Clear button. This should remove the airway intersections from your map(s).

Map Customization Options

When using the RMT Map, you are not limited to a single, static display. This is your own reference Tool and you can make the map appear exactly as you want. For this reason, the RMT Map includes numerous display options for you to manipulate.

Map Preferences

To change the color and line style of the available RMT Map overlays, select **Settings > Display Options**. This opens the **Map Preferences** window.

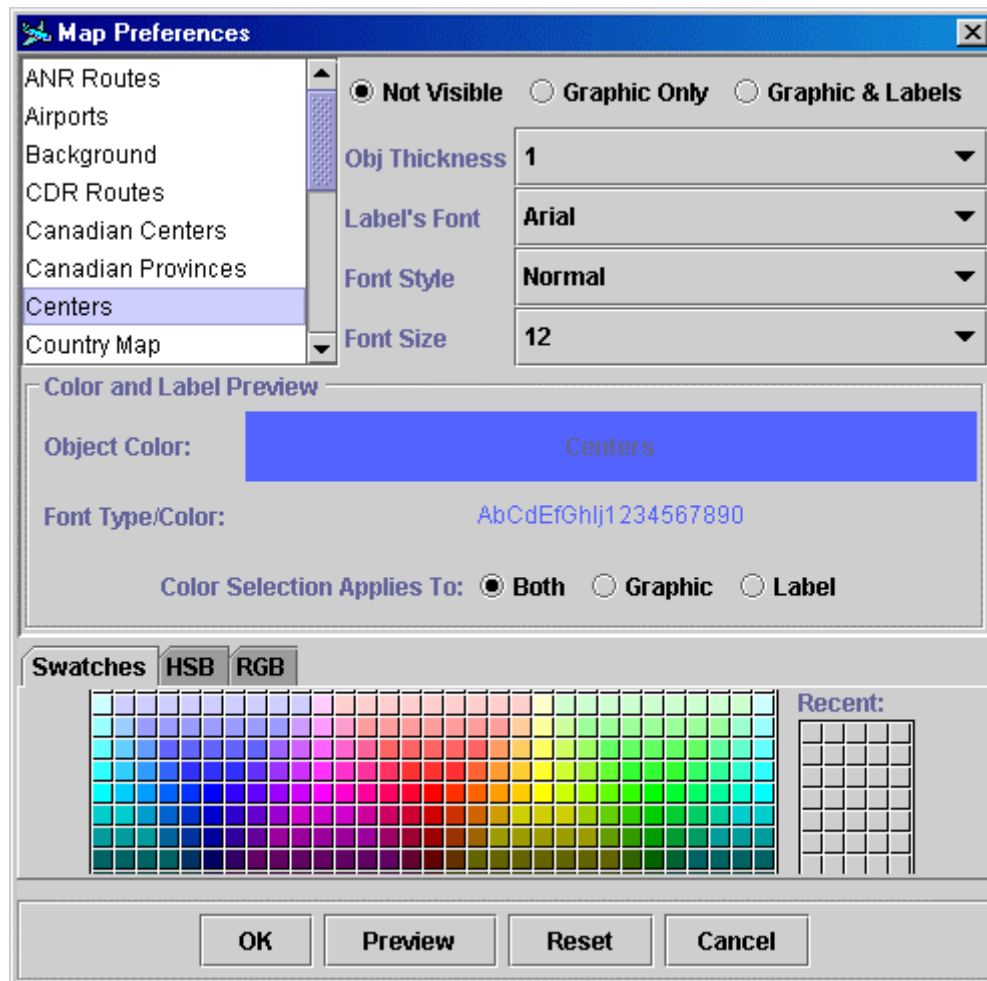


Figure 42: Map Preferences Window

Every overlay is made up of lines that denote borders or routes; this is the graphic portion of the overlay. You can also choose to label the overlays; the labels are the text portion of the overlay. You can change both the graphic and text attributes of an overlay using the Map Preferences window.

To change the display attributes of a map overlay, select an overlay from the menu in the upper left of the Map Preferences window. Note that airway intersections are considered "fixes" on the

map. To change the way the map displays airway intersections, select the overlay named Fixes. Once you select an overlay, you can choose from the listed attributes to change the overlay appearance. You must choose options for each overlay individually.

- **Object Thickness** - Click the arrow to reveal a pull-down menu of available line thickness values. Click the desired thickness to change the overlay graphic.
- **Label's Font** - Click the arrow to reveal a pull-down menu of available fonts. Click the desired font for the overlay label.
- **Font Style** - Click the arrow to reveal a pull-down menu of available styles. Click the desired font style for the overlay label.
- **Font Size** - Click the arrow to reveal a pull-down menu of available font sizes. Click the desired font size for the overlay label.
- **Object Color and Font Type/Color** - Next to the label **Color Selection Applies To**, click whether you want the color you choose to apply to the overlay graphic, label, or both. Next click a color tab to reveal a palette of colors for the overlay graphics and labels. There are several color palettes available: swatches, HSB, and RGB colors. Click the desired color for the graphic or label. The Map Preferences window will preview the color for you. Continue selecting colors until you find a desired color scheme for your overlay.

To view how your settings will look on the map, click the radio button on the top of the Map Preferences window marked "**Graphic & Labels**." Then click **Preview**.

To return the overlay settings to their original default values, click Reset.

Save Your Settings

Once you customize the RMT Map, you probably want to save those display settings for your next RMT session. RMT allows you to manually save any modifications made to the Map display. Select **Settings > Save Settings**. This will save the display settings to your local configuration file so that the Map will open in RMT exactly as you closed it.

Displaying Overlays

Certain default overlays in the RMT Map Tool are selected such that they will appear on the map automatically. These are the coded departure routes, advanced navigation routes, miscellaneous routes, and preferred routes. The routes are always chosen so that when you choose the Send to Map option from the CDR Tool or NFDC Tool, your queried routes will actually be displayed on the map.

You can customize the appearance of the RMT Map by choosing additional overlays. For example, you can view sector boundaries, bordering countries, fixes, and jet routes on the map. As well, you can choose to display the overlay with a graphic, a text label, or both. There are several ways to display the overlays.

Choosing Overlays Using Map Preferences

You can choose to display overlays at the same time you are choosing the appearance of your overlays in the Map Preferences window. Select **Settings > Display Options** to open the Map Preferences window. When you click an overlay option in the Map Preferences window, one of the radio buttons to the right of the overlay indicates whether that overlay is displayed on the map. The radio buttons indicate whether the overlay is not visible, only the overlay graphic is visible, or both the overlay graphic and labels are visible.



Figure 43: Radio Buttons in the Map Preferences Window

If the overlay is marked as not visible, you can click another radio button to display either the graphic or graphic and label portion of the overlay. Repeat the process for any overlay you wish to display. Likewise, to remove any overlay from the map, click the overlay name in the Map Preferences window and click the radio button marked Not Visible. To see what the map looks like with your custom overlays, click the **Preview** button in the Map Preferences window. When you are happy with the map appearance, click **OK** on the Map Preferences window to close the window and display the map with your custom overlays.

Using Show/Hide Overlays

Select **View > Show/Hide Overlays** or **right-click** on the map and select **Show/Hide Overlays** for a quick view of all your overlay options. The **Show/Hide Overlays** window appears with a list of all the available overlays.

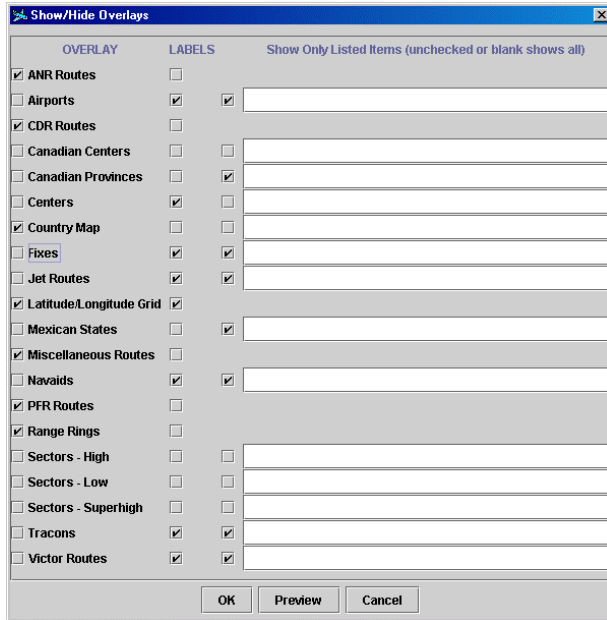


Figure 44: Show/Hide Map Overlays

To display an overlay, click the box under the Overlay column next to the overlay name so that there is a checkmark in the box. This will force the overlay graphic to appear on the map when you click **OK**. To view the overlay labels in addition to the graphics make sure that the boxes under the **Overlay** and **Labels** columns are both checked. Likewise, to hide an overlay on the map, click the box next to the overlay name in the Overlay column to uncheck it. The overlay should disappear from the map.

Once you check the desired overlays to display on the map, you can click **Preview** to see what your map will look like with the overlays. You can then change any of your selections. Click **OK** when you are satisfied with the results. This will close the Show/Hide Overlays window and display your selected overlays on the map. To close the window without taking any action, click **Cancel**.

Filtering Overlays

Using overlay *filters*, you dictate specific elements within the overlay to view on the map. For example, when you choose to display fixes as an overlay, all fixes within the United States will appear on the map. Using a filter, you can choose to display only specific fixes.

Select **View > Show/Hide Overlays** to apply filters to your overlays. The Show/Hide Overlays window appears (see Figure 44).

You should see a column titled **Show Only Listed Items**. This column provides a text field in which you will type the specific filter values for an overlay. To apply a filter to an overlay, first type the name of the specific overlay element(s) you wish to view. For example, type PETTY and WISKE in the Show Only Listed Items column's text field on the Fixes row. You can use a wildcard symbol (*) to enter non-specific data points in the Show Only Listed Items text fields. Note that each element must be separated by a space. You must click the box to the left of the text field to actually apply the filters. When this box is checked the RMT Map will only display the items you defined in the Show Only Listed Items column. When this box is not checked, the RMT Map will display all the elements for an overlay.

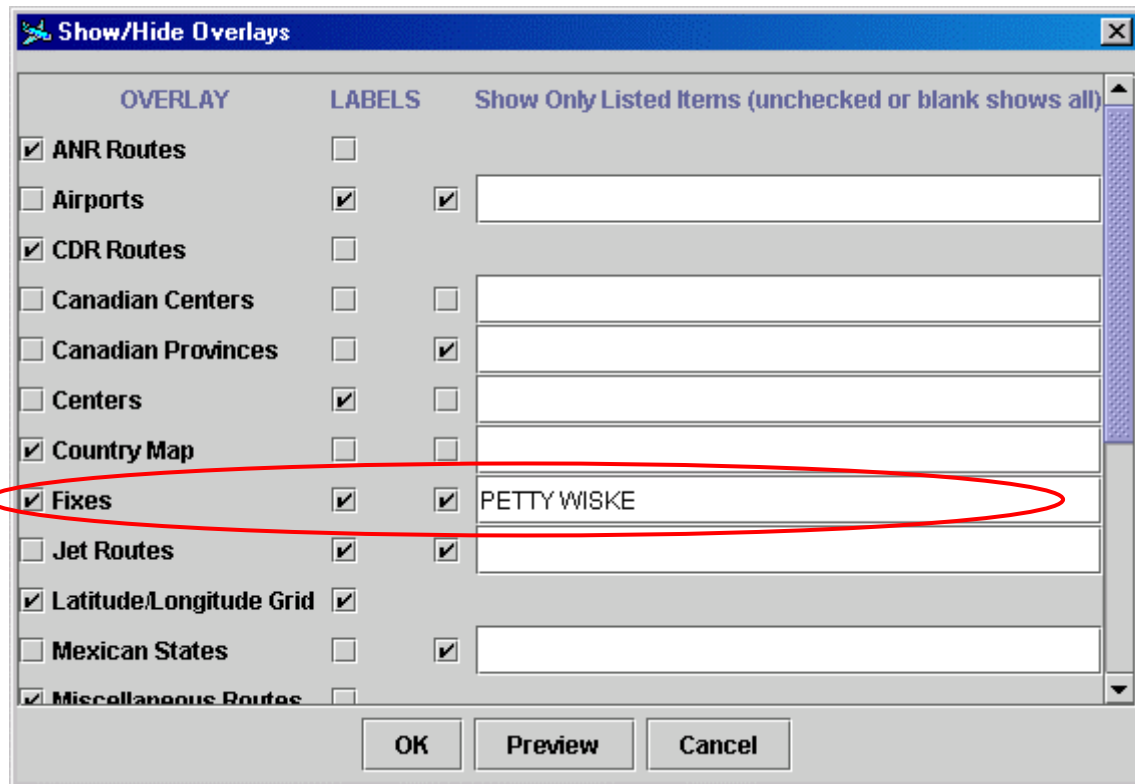


Figure 45: Specific Center Overlay Filters Defined

When you type in filters, you must have the box next to the Show Only Listed Items column checked. If the box is not checked, the map will show *all* the elements for that particular overlay. You can keep the filters saved in the Show/Hide Overlays window, but choose when to display the filtered information by checking or unchecking the box next to Show Only Listed Items for a specific overlay.

To preview the map display with your filtered overlays, click the **Preview** button. Once you choose which overlays to display with filters, click the **OK** button to close the window and return to the RMT Map.

To save your filters for your next RMT session, select **Settings > Save Settings**. This will save any filters typed in the Show/Hide Overlays window.

To clear the filters you have entered for an overlay, click the filter with your mouse and click **Delete** on your keyboard.

Display Single Overlay Elements

You can type in a group of different, specific overlay elements to view or delete on the map. This provides a shortcut to typing in filter values separately for each overlay element. Using the **Show Overlay Elements** option, you type in a string of overlay elements to display on the map. The values can include elements from different overlays. For example, if there is a specific set of centers, airports, and nav aids you wish to view, use the Overlay Elements window to type the codes for the different overlay elements all at once.

Click **Ctrl+S** or select **Show Overlay Elements** from the **View** menu or the pop-up menu that appears when you **right-click** on the map. The Show Overlay Elements window appears (Figure 46).

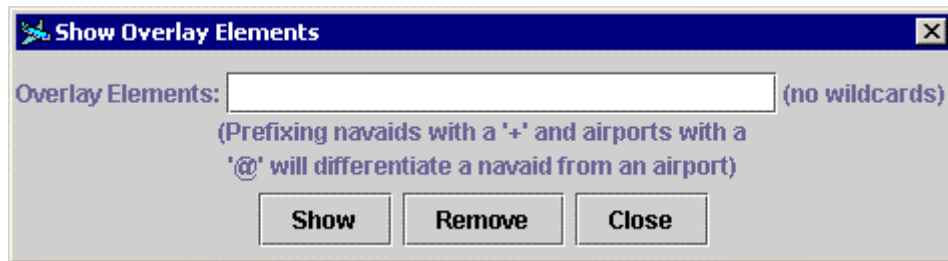


Figure 46: Show Overlay Elements Window

Type any specific fixes, airports, navaids, centers, jet routes, and victor routes you want to see on the map into the *Overlay Elements* field. Each element is independent of the others and should be separated by a space. Any overlay entity that you choose to show will automatically show up in the Filters section of the Show/Hide Overlays window.

Please note that you cannot use a wildcard symbol (*) in the Overlay Elements field. To differentiate between a navaid and airport code, you may prefix navaid codes with a plus symbol (+) and airport codes with an at symbol (@). Otherwise, if a navaid and an airport share the same 3-character identifier, both will appear on the map.

For example, in Figure 47, the user has entered "@ord j80 bos." ORD is specifically identified as an airport by the "at" symbol (@). However, notice that BOS appears on the map as both an airport and a navaid because it is not defined in the user's string. You cannot currently enter U.S. State names, Canadian Provinces, or Mexican States using Show Overlay Elements. However, you can add these to the map using the Show/Hide Overlay elements window and the filters field contained within that window.



Figure 47: Overlay Elements Displayed on the Map

Add Range Rings

Range Rings are a set of concentric circles that you can place on the map for reference purposes. Range Rings differ from the other overlays in that you can adjust the setting for the rings, including the latitude and longitude of the center for the rings, spacing between each ring, and number of rings. You can choose to display the range rings overlay using any of the methods previously discussed in this chapter. However, to actually add new range rings, you must use the menu that appears when you **right-click** anywhere on the map. Click **Add Range Rings** on the resulting menu. The **Add Range Rings** window appears.



Figure 48: Add Range Rings Window

The default value for the range ring center match the location you **right-click** on the map. However, you can change the center (latitude/longitude) values to whatever you want. You can also change the ring spacing and enter a new value for the number of rings that appear from the center.

To remove a set of range rings, **right-click** near the center of the rings you wish to remove and select **Remove Range Rings** from the resulting menu.

Display Custom Routes

You can define a custom route and then display the route on the map. Select **Show Miscellaneous Routes** from the map's **View** menu or from the menu that appears when you **right-click** on the map to bring up the **Show Miscellaneous Routes** window. In the Route String field, type in any combination of codes that defines your route. Your route elements should be in the order you want the route to appear from start to finish. The RMT Map will connect the route elements graphically according to the order in which they are typed. Once you have typed in your route, click **Show** to see the route on the map (Figure 49).

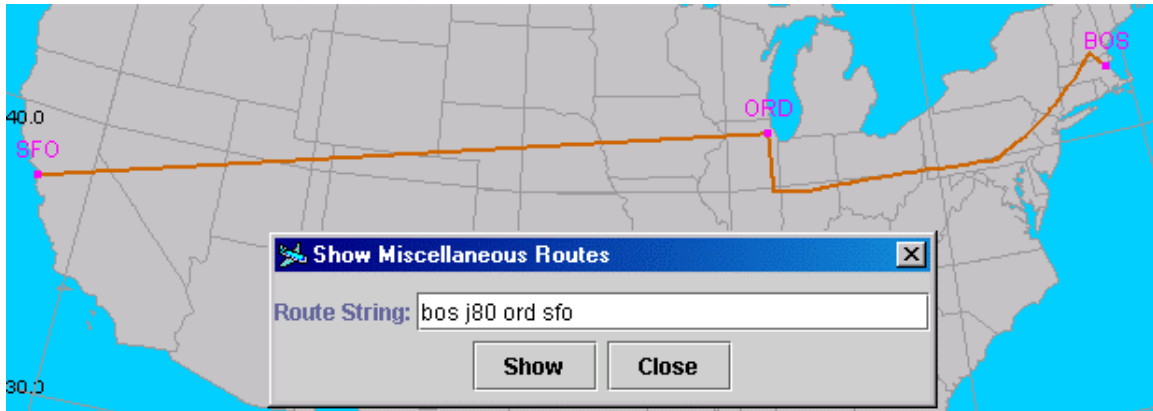


Figure 49: Miscellaneous Route String

In Figure 49, the user entered a route string that begins at BOS, uses the J80 jet route, passes over ORD, and ends at SFO. You do not need to differentiate between nav aids and airports in the Show Miscellaneous Routes window.

Latitude/Longitude Grid

Using the Show/Hide Overlays window, you can place a grid of latitude and longitude lines over the map. If you want to change the appearance of the latitude/longitude grid, **right-click** anywhere on the map and select **Edit Latitude/Longitude Grid**. This brings up the **Latitude/Longitude Grid Settings** window.

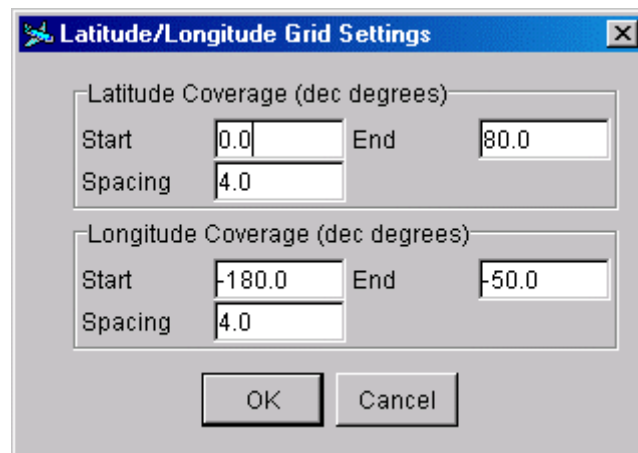


Figure 50: Latitude/Longitude Grid Settings

Use the Latitude/Longitude Grid Settings window to enter new values for the Start, End, and Spacing of latitude and longitude lines on the map. Changing the values will compress or expand the grid overlay on the RMT Map. Depending on the type of analysis you are conducting, a smaller or larger grid overlay could be more beneficial.

Using the Map Zoom

You can focus on specific areas of the map using the RMT Map's *zoom* feature. To **Zoom In**, click on the map in the upper-left portion of the area you would like to see. Using your mouse, click and drag down and to the right, creating a rectangle.

Release the mouse when you have enclosed the desired area within the rectangle. The area within your rectangle will be enlarged to the size of the RMT Map Tool window. In Figure 51 the user has zoomed in a section of the midwest to see jet routes and centers more closely.

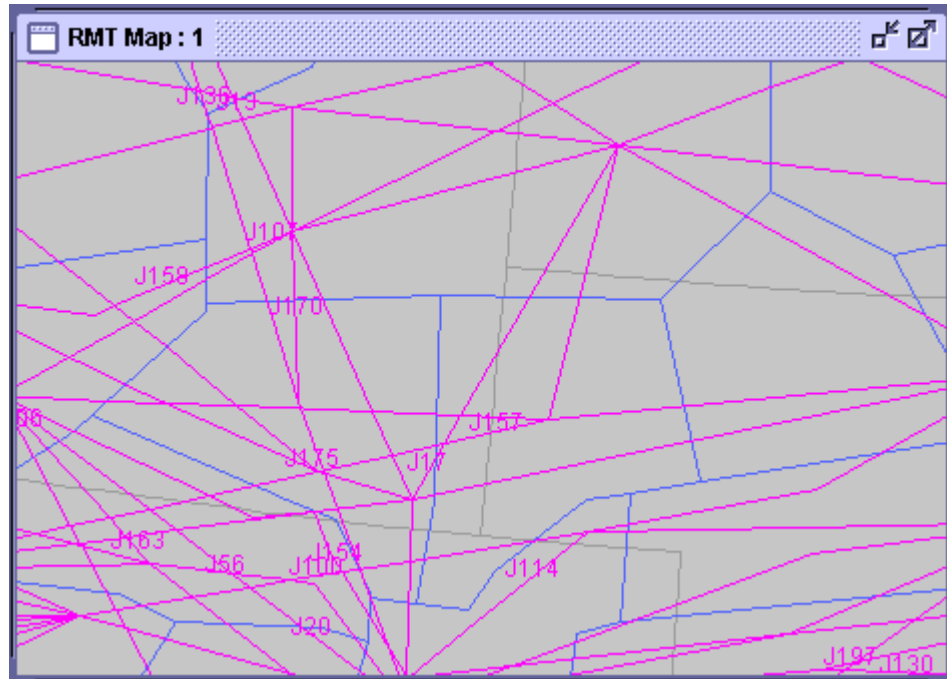


Figure 51: Zoom-in View

To **Zoom Out**, simply reverse the process. Click and drag up and to the left from the lower right corner of an area.

Release the mouse to complete the zoom out process. The degree to which the map zooms out is proportional to the size of the rectangle you draw. Larger rectangles will display a larger portion of the map in the map Tool window.

To *undo* the last zoom action you performed, **right-click** anywhere on the map and click **Undo Zoom** from the menu. Or select **View > Undo Zoom**.

To *reset* the map to its original size, **right-click** anywhere on the map and select **Reset Zoom** or select **View > Reset Zoom**.

Using Multiple Maps

You can open multiple RMT Map windows. Select **View > New RMT Map Window**. A new RMT Map window opens with the default settings, including colors and filters, you saved previously in your default configuration file. The map windows are numbered in order of their appearance (for example, RMT Map:1, 2, or 3) so that you can keep track of the number of new windows you open.

View Different Map Window

To bring a different map window forward, either click on the title bar of the desired window or select **Window > RMT Map: X**.

Send Routes to Multiple Maps

When you select routes for display on the RMT Map, the routes will appear in all your RMT Map windows by default. This is true for any route, including CDRs, ANRs, and preferred routes. For information on sending routes to the map, see View Routes on the Map on page 53.

Customize Multiple Maps

Each map can be customized differently. The display options you choose for one map window are only valid for that window and will not affect the display of any other map windows. For information on customizing the map display, see Map Customization Options on page 54.

Close Map Windows

You can close additional map windows individually or all at once. However, the original map window, RMT Map: 1, will always remain open.

To close a single map window you opened, bring that map window forward and click the X icon in the upper right corner of the window.

To close all additional map windows you opened, click **Window > Close Map Windows**. This will close *all* the map windows except for the original window, RMT Map: 1.

Clear the Map

To remove all overlays and routes and return your map to its original size, you can clear your map display(s). Clearing the map will clear the map and return the display to its original setting, with no overlays. To reset the map, select **View > Clear Map** or **right-click** on the map and select **Clear Map** from the pop-up menu.

Reset the Map

Select **View > Reset Map** or **right-click** on the map and select **Reset Map** from the pop-up menu to return your map display to its default settings.

Save the Map

You can save your map display as a gif image. This gif image can be opened later in any program capable of displaying a graphics file. To save your map image, select **File > Save As Gif**. Select the directory in which you want to save the file and enter a name for a file.

Change Route Records

Flight routes do not remain static. Individual routes may change or become obsolete; new routes could be created; and route element names could change. Using RMT, FAA Administrator users are able to modify coded departure routes using the CDR Tool and advanced navigation routes using the ANR Tool. Note that these are the *only* routes that may be changed using RMT.

All FAA users can view modifications made to the route records in the CDR and ANR databases. However, only ATCSCC and ARTCC administrators can actually change the route records. Administrators have the ability to make necessary route modifications in the CDR and ANR *Staging* databases.

The ATCSCC administrator can create, delete, or modify any route, from any center. ARTCC administrators can only create, delete, or modify routes departing from their own center.

If you are an administrator, you can use the CDR or ANR Tool route modification functions to complete any route modifications. If you prefer, you can also update your route records by importing a text file with all your routes into the staging database. The CDR Tool reads both ASCII and Stereo files into their database. The ANR Tool reads from an ASCII file.

View Route Record Modifications

Any FAA user can view the local and global modifications that have been made to a route. Viewing the modifications can be especially important, however, to ATCSCC and ARTCC administrators. The global modifications display actually indicates which centers need to update their route records to reflect global name changes. For example, a STAR number may have changed from SWEED5 to SWEED6, which means administrators need to make this change on all CDR and ANR route records.

Viewing a local modification shows all the modifications made to a *single route record*. Viewing a global modification will show the old and new values for a route element as well as *the centers and number of routes* affected by a global name change.

View a Local Modification

Make sure that the Modifications section of the CDR/ANR Tool is displayed by selecting **Modifications > Show Modifications**. You should see the Modifications section at the bottom of the Tool. Click the **Local Modifications** tab.

To view a local modification, you must first select the route record whose modification history you want to see. Run a search in the CDR/ANR Tool for the desired record. For information on running a search, see "Searching in the CDR and ANR Tools" on page 21. In the Query Results section of the CDR/ANR Tool, double-click the route record for which you want to view modification information. The route record is highlighted and appears in the Modifications section with a listing of all the modifications made to the route. Each modification made to a single route is listed in its own row.

-Modifications							
Global Modifications				Local Modifications			
ModTime	RCode	Orig	Dest	DepFix	Route String		
07/18/2002...	ORDBOS4N	KORD	KBOS	PETTY	KORD PETTY HALGI MAMER NOTAP DEMKO MUPUX KIXIR LIMRE WEDGE SEEDY SCUPP K...		
07/18/2002...	ORDBOS4N	KORD	KBOS	PETTY	KORD PETTY HALGI MAMER NOTAP DEMKO MUPUX KIXIR LIMRE WEDGE SCUPP KBOS		
07/18/2002...	ORDBOS4N	KORD	KBOS	PETTY	KORD PETTY HALGI MAMER NOTAP DEMKO MUPUX KIXIR LIMRE ENE SCUPP KBOS		
02/21/2002...	ORDBOS4N	KORD	KBOS	PETTY	KORD PETTY TVC NOTAP DEMKO MUPUX KIXIR LIMRE ENE SCUPP KBOS		

Figure 52: Local Modifications Tab with Route Modification History

The columns in the Local Modifications Tab are the same as in the Query Results Table. For more information on the columns, see The Query Results Section on page 41.

View a Global Modification

Make sure the Modifications section is visible. Select **Modifications > Show Modifications** to see the Modifications section. Click the **Global Modifications** tab in this section. All the global modifications planned for the next cycle and future cycles are listed. The Refresh button allows you to refresh the Global Modification information

Modifications

Global Modifications

Local Modifications

ID	EffDate	Time	Init	ModUser	Center	OrigVal	FinalVal	Remarks	ZAB	ZAU	ZBW	ZDC	ZDV	ZFW
1	06/13/2002	05/07/2002 19:46:52	GW	ADMIN_METRON	ADMIN	LGC8	LGC9	STAR UPNUMBER...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	06/13/2002	05/07/2002 19:48:48	GW	ADMIN_METRON	ADMIN	QBALL4	QBALL5	STAR UPNUMBER...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	06/13/2002	05/07/2002 19:49:18	GW	ADMIN_METRON	ADMIN	BLGRS4	BLGRS5	DP UPNUMBERED...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	06/13/2002	05/07/2002 19:49:58	GW	ADMIN_METRON	ADMIN	ACORD2	ACORD4	NAVCANADA STAR...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	06/13/2002	05/07/2002 19:51:50	GW	ADMIN_METRON	ADMIN	PELUE1	CANC_ELEMENT	CANCELLED ELE...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	06/13/2002	05/07/2002 19:52:14	GW	ADMIN_METRON	ADMIN	NEW_ELEMENT	EBOVE1	NEW ELEMENT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Refresh

Recalculate

New

Update

Delete

Figure 53: Global Modifications Tab with Changes Listed

Each global modification is listed in its own row with several information columns. The columns available in the global modifications tab are:

- **ID** - This is a number automatically assigned to the modification based on the order the modifications are created.
- **Effective Date** - The effective date is the actual chart date on which the modification will go into effect.
- **Time** - This is the global modification record "create" time, or, the date and time the global modification was entered into the system.
- **ModInit** - This field is for FAA administrators only and will not be visible to non-administrators. The initials are the FAA-assigned initials of the specific user who entered the global modification.

- **ModUser** - The user column displays the user type of the person who entered the global modification. The user type will always be the administrator from the ATCSCC, ATA-100, or a specific center administrator.
- **Center** - The administrator that entered the global modification. With the exception of the ATCSCC, each center can only make changes to the routes they control. If their changes affect other centers, the other centers must make changes to their own routes. The administrator listed in this column can be the ATCSCC, ATA-100, or an FAA center.
- **OrigVal (Original Value)** - This is the name of the route element before it was changed.
- **FinalVal (Final Value)** - This is the new name for the updated route element.
- **Remarks** - Any remarks that the modifier put in when entering the global modification are listed here.
- **Center Names** - ARTCC users will see their center listed at the end of each global modification row. The box color in the center column indicates whether the center is affected by the modification and whether the center has updated their affected routes. Gray indicates that the center is not affected. Green indicates that some center routes are affected, but have already been updated. Red indicates that some center routes are affected and still need to be updated.

Each center is responsible for ensuring it enters the global modifications that affect routes they control for every 56-day cycle. You can see whether your center has completed modifying its affected routes in the global modifications tab. At the end of each global modification row is your center name. If the box under your center is green, the global changes have been made. If the box under your center is red, your center still needs to make the necessary changes. Only ARTCC administrators can actually make the route record changes necessary. See [Perform a Global Modification](#) on page 72 for more information on making a global modification.

Customize the Modifications Section

Local and global modifications are listed in rows with several columns of information. You can change the appearance and order of the rows, as well as use the CDR/ANR Tool sorting capabilities to customize your modifications display. Note that if you do change the column appearance in the Modifications section, you cannot save the display changes between RMT sessions.

Sort Records

Double-click any column header to sort modifications in ascending order according to column selected. To view a descending sort according to the same field, simply double-click on the column header again.

Change Column Order

To rearrange column order, simply click and drag the column header you wish to move to the desired location. The moved column will drop in place and the other columns move to the right of the inserted column when you release the mouse.

Resize Columns

To resize a column, place your cursor on the line between two columns. When the cursor becomes a double arrow, click and drag the border to the desired width.

Update Routes Directly from RMT

There are create, delete, and modify functions within the CDR/ANR Tool so that you can work directly in the software program to make any route record modifications. The route modification functions are simple to use and especially useful when you have a few changes to make.

Administrators with especially numerous route record updates may want to use the option of updating routes from their own ASCII or Stereo file (see Update Routes from a File on page 75).

Create a New Route

In the CDR/ANR Tool click the **New** button. This brings up the **Route Editor** window.

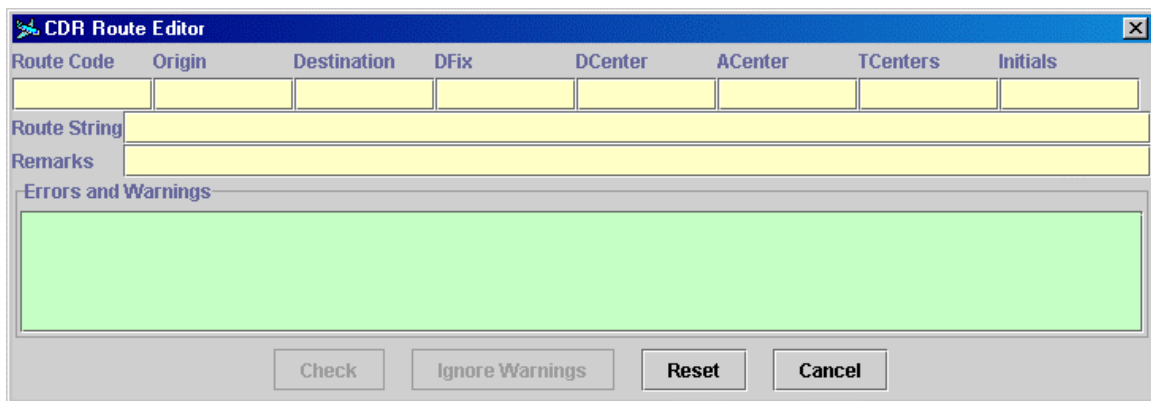


Figure 54: Create New Record - CDR Route Editor Window

Enter Route Parameters

To create a new route, you must fill in all required fields. The tool will fill in any fields you leave blank.

Shortcut Alert! If you are creating a new route that is very similar to an existing route, you do not have to fill in all the input fields again. Instead, use the CDR/ANR Tool to search for the similar existing route. Click the route in the Query Results section so that it is highlighted. Click the New button. The Route Editor window appears with the input fields filled in with the existing route data. Simply change the input fields you need to make the new route.

- **Route Code (required)** - Enter the route code: an 8-character route designator made up of the 3-character departure airport code, 3-character arrival airport code, and a 2-character facility-designated code. Note that CDRs use the 2-character facility code at the end of the route code. ANRs use the 2-character facility code at the beginning of the route code. Also note that the letters 'I' and 'O' are not allowed in the seventh and eighth character position of the CDR Route Code or the first and second character positions of the ANR Route Code.
- **Origin (required)** – Enter a 3 or 4-character airport code to identify the route's point of origin (Canadian airports require the 4-character ICAO codes. Anchorage, AK and Honolulu, HI require PANC and PHNL, respectively.).
- **Destination (required)** - Enter the 3 or 4-character airport code to identify the route's destination (Canadian airports require the 4-character ICAO codes. Anchorage, AK and Honolulu, HI require PANC and PHNL, respectively.).
- **Initials (required)** - This field is for the modifier's initials. You must enter your FAA-assigned initials to modify a route. Your FAA-assigned initials differ from the actual initials in your name.
- **Route String (required)** - Enter the list of route elements (i.e. fixes and nav aids) that make up a route.
- **DFix (Departure fix)** - Enter the departure fix. You may enter a hyphen (-) in this field if there is no real departure fix for the route.
- **DCenter (Departure Center)**– Enter the 3-character center code of the origin airport.
- **ACenter (Arrival Center)** - Enter the 3-character center code for the route's destination airport.
- **Tcenters (Traversed Centers)** - Enter the 3-character center codes for all centers through which the route traverses.
- **Remarks** - Use this field to enter any remarks about route changes or new record additions.

When you enter new data you must use the accepted format. RMT will change all characters to upper case. Spaces separate each element. No leading zeros (0) are permitted. For example, J12 is permitted but J012 is not for Victor or Jet routes. STAR numbers must include a number character. For example, SUNSS4 is permitted but SUNSS* is not. Note that the letters 'I' and 'O' are not allowed in the seventh and eighth character position of the CDR Route Code or the first and second positions of the ANR Route Code.

In the Origin, Destination, and Route String fields, you must enter the 4-character ICAO code for foreign cities and cities outside the continental U.S. The 4-character ICAO code is inserted automatically for cities within the continental United States.

To clear your input fields, click the **Reset** button. Note that this will clear *all* the input fields.

Check for Errors

Once you fill in the input fields, click the **Check** button. The CDR/ANR Tool must validate the new route against the NFDC tables to check for errors. Any errors found are displayed in the **Errors and Warnings** section of the Route Editor window. Read the error and warning messages carefully to see what changes you should make to the input fields before completing the new route record. Change the necessary input fields and click the Check button again.

Note that Canadian and Mexican airports, nav aids, and fixes are not yet included in the database. Warning messages will appear stating that "TOKEN is not found." If the message is generated because of a Canadian element, you can ignore the message.

Complete the New Route Record

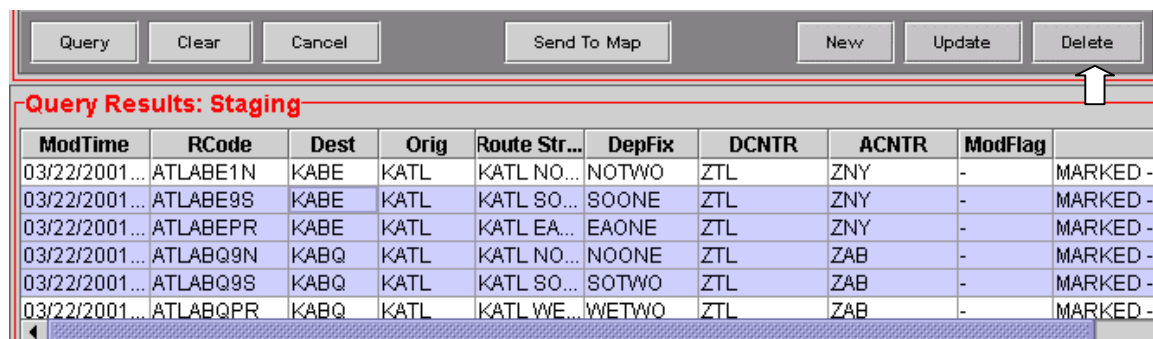
Once you have no error or warning messages, you can click the **OK** button to complete the new route record.

If you still have error or warning messages and want to proceed without changing the input fields, click the **Ignore Warnings** button. This will create the new route record despite the presence of errors or warnings.

Delete a Route

Select Route Records to Delete

To delete a route, you must first perform a search in the CDR/ANR Tool to find the route(s) you want to delete. For information on performing a search, see the chapter titled "Perform a Search" on page 21. Your search results should appear in the Query Results section of the CDR/ANR Tool. Select the route record(s) you want to delete in the Query Results section. To select more than one route record, ctrl-click multiple route records; click a route record and then shift-click another route record to select a range; or click and drag over a range of route records.



ModTime	RCode	Dest	Orig	Route Str...	DepFix	DCNTR	ACNTR	ModFlag	
03/22/2001...	ATLABE1N	KABE	KATL	KATL NO...	NOTWO	ZTL	ZNY	-	MARKED -
03/22/2001...	ATLABE9S	KABE	KATL	KATL SO...	SOONE	ZTL	ZNY	-	MARKED -
03/22/2001...	ATLABEPR	KABE	KATL	KATL EA...	EAONE	ZTL	ZNY	-	MARKED -
03/22/2001...	ATLABQ9N	KABQ	KATL	KATL NO...	NOONE	ZTL	ZAB	-	MARKED -
03/22/2001...	ATLABQ9S	KABQ	KATL	KATL SO...	SOTWO	ZTL	ZAB	-	MARKED -
03/22/2001...	ATLABQPR	KABQ	KATL	KATL WE...	WETWO	ZTL	ZAB	-	MARKED -

Figure 55: Deleting Multiple Routes

Complete the Deletion

Once you select the route record(s) to delete, click the **Delete** button. The **Delete Records** window appears. In this window, you are asked if you really want to delete the selected route(s).

To complete the deletion, enter your FAA-assigned initials into the **User's Initials** field. Enter any remarks you feel necessary to give reasons for the deletion. Click OK to complete the

deletion. The record(s) you deleted will still be visible in the Results table, but the **ModFlag** column will contain a “D” to indicate that the route has been marked for deletion.

Cancel the Deletion

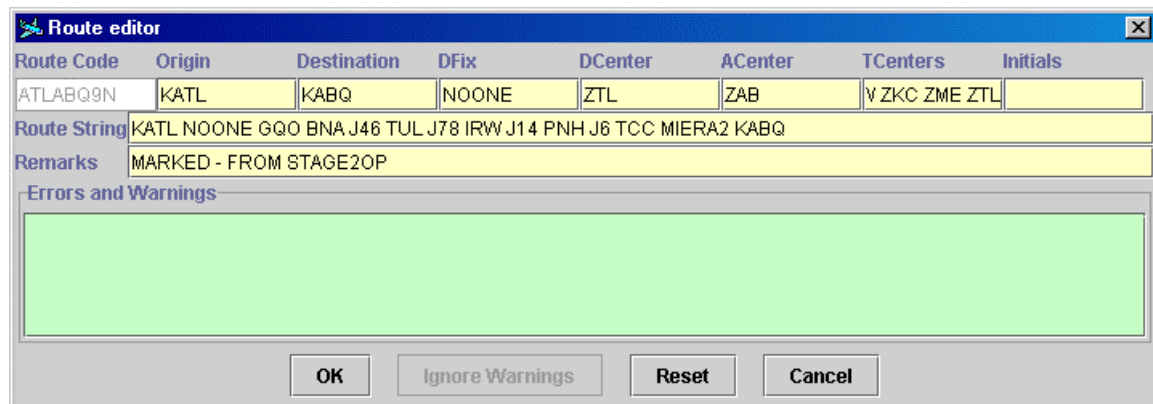
If you decide you do not want to delete the route record(s), click **Cancel** in the Delete Records window. The window will close and no action is taken on the selected route record(s).

Modify Existing Routes

The CDR/ANR Tool recognizes two types of modifications to existing routes: *local modifications* and *global modifications*. A local modification is a change that affects a single route record. For example, the route string may change. A global modification is a name change to a route element and can affect many routes. For example, a STAR number could change, which affects any coded departure route using that STAR number.

Perform a Local Modification

Local modifications affect only one route record, such as changing part of the route string for a single route or reinstating a deleted route. To make a local modification, perform a search in the CDR/ANR Tool to find the route you want to modify. For information on performing a search, see the chapter "Perform a Search" on page 21. Your search results should appear in the Query Results section of the CDR/ANR Tool. Click the route record you want to modify in the Query Results section so that it is highlighted. Click the **Update** button.



The screenshot shows the 'Route editor' window with the following data:

Route Code	Origin	Destination	DFix	DCenter	ACenter	TCenters	Initials
ATLABQ9N	KATL	KABQ	NOONE	ZTL	ZAB	V ZKC ZME ZTL	

Below the table, the 'Route String' is 'KATL NOONE GQO BNA J46 TUL J78 IRW J14 PNH J6 TCC MIERA2 KABQ' and the 'Remarks' are 'MARKED - FROM STAGE20P'. At the bottom, there is an 'Errors and Warnings' section (currently empty) and buttons for 'OK', 'Ignore Warnings', 'Reset', and 'Cancel'.

Figure 56: Modify an Existing Record - Route Editor Window

The route record data appears in the Route Editor window. Make the necessary changes to any of the input fields. When reinstating a deleted route, you should not have to change the input fields. However, you may want to enter remarks about the route modification in the Remarks input field.

Check for Errors

Once you fill in the input fields, the **OK** button will change to read **Check**. Click the **Check** button. The CDR/ANR Tool must validate the modified route against the NFDC tables to check for errors. Any errors found are displayed in the **Errors and Warnings** section of the Route Editor window. Read the error and warning messages carefully to see what changes you should make to the input fields before completing the modification. Change the necessary input fields and click the Check button again.

Note that Canadian and Mexican airports, nav aids, and fixes are not yet included in the database. Warning messages will appear stating that "TOKEN is not found." If the message is generated because of a Canadian element, you can ignore the message.

Complete the Modification

Once you have no error or warning messages, you can click the **OK** button to complete the modification to the route record.

If you still have warning or error messages and want to proceed without changing the input fields, click the **Ignore Warnings** button. This will create the modified route record despite the presence of errors or warnings.

Once the modification is complete, the route record in the Query Results section will have an "M" in the ModFlag column to denote that the record has been changed. If you reinstated a deleted route, the ModFlag column should replace the "D" with an "M."

Perform a Global Modification

Global modifications affect many routes because they are an actual name change to a common route element.

To make a global modification, select **Modifications > Global Modification**. The Global Modification window appears. There are 4 sections in the Global Modifications window: Effective Date, Changes, Action, and Status.

Global Modification

Effective Date
The effective chart date is the date that these changes will be placed into the Operational database. If the effective chart date is set to the next chart date (06/13/2002), then you will need to make the changes to the Staging database during the active period of the current chart cycle (starting 04/18/2002).

Effective Chart Date: 06/13/2002 ▼

User's Initials:

Changes
Original Value: Final Value:
Remarks:

Action
☒ Create global modification entry only.
☐ Create entry and update selected centers. All Centers ▼

Status
Progress:
Status: Please enter global update info.

OK Cancel

Figure 57: Global Modifications Window - ATCSCC Administrator View

Global Modification

Effective Date
The effective chart date is the date that these changes will be placed into the Operational database. If the effective chart date is set to the next chart date (01/25/2001), then you will need to make the changes to the Staging database during the active period of the current chart cycle (starting 11/30/2000).

Effective Chart Date: 01/25/2001 ▼

User's Initials:

Changes
Original Value: Final Value:
Remarks: none

Action
☒ Create global modification entry only.
☐ Create entry and update your center.

Status
Progress:
Status: Please enter global update info.

OK Cancel

Figure 58: Global Modifications Window - Center Administrator View

In the **Effective Date** section, you must put in the chart date for which you want the global modification to take effect. The default date is the next chart date. However, you can choose to have the global modification take place during a future chart date. Click the triangle on the right of the Effective Chart Date field and a drop-down menu appears with the next 5 valid chart dates. Click a chart date to select it as your Effective Chart Date. To choose a chart date beyond the next 5 planned chart dates, simply type a valid chart date in the Effective Chart Date field. To view the valid chart dates, select **Help > Show Chart Dates**. In this section, you must also type in your FAA-assigned initials in the User's Initials field.

In the **Changes** section, you need to type in the actual global modification change that is to take place. Global modifications include route elements that are new, cancelled, or modified. You can also type in any remarks you feel necessary about the change in this section (e.g. NFDD number).

- To enter a **new route element**, type NEW_ELEMENT in the Original Value field and the element name in the Final Value field.
- To enter a **cancelled element**, type in the element name in the Original Value field. Type CANC_ELEMENT in the Final Value field. Note that a red box will appear on the global mod row for a center if the cancelled element is found in that center's routes. The center must modify or delete the affected routes as appropriate.
- To enter a **modified element**, type the original value of the route element in the Original Value field. Type in the new value of the route element in the Final Value field. For example, if STAR number PONIE2 is to change to PONIE3, the original value would be PONIE2 and the final value would be PONIE3.

There are two options in the **Actions** section. Checking **Create global modification entry only** will create the modification and place the entry in the table for others to see. Center administrators also have the option to **Create entry and update your center**, which will create the modification and automatically update any of your center's routes affected by the change. Other centers are still responsible for changing their own routes. The ATCSCC administrator can update all the centers' routes affected by the global modification by checking **Create Entry and Update Selected Centers**.

The **Status** section gives you instructions for filling in the Global Modifications window fields and informs you of the progress while changing the necessary route records.

A window will appear when the program has finished updating the necessary route records. The ModFlag column for the changed routes will have an "M" to indicate a modified route record. In the remarks field, all modified records will have a default message with the old and new route element name and the user who made the modification.

Query Results: CDR Staging

Route String	DepFix	DCNTR	ACNTR	TCNTRs	ModFlag	Remarks	ModInit	Modt
B J8 BOD GAG TUL RZC ARG CGI QBALL5 KSTL	LVS	ZAB	ZKC	ZAB ZKC ZME	M	GLOBAL MOD [QBALL4] TO [QBA...	AG	ADMIN
/ BOS MHT CAM J547 SYR J29 PXV QBALL5 KSTL	LFV	ZBW	ZKC	ZBW ZID ZKC ZOB	M	GLOBAL MOD [QBALL4] TO [QBA...	ED	ADMIN
TWO GAD MEM QBALL5 KSTL	WETWO	ZTL	ZKC	ZKC ZME ZTL	M	GLOBAL MOD [QBALL4] TO [QBA...	MDO	ADMIN
ONE SPA HMV IUI PXV QBALL5 KSTL	EAONE	ZTL	ZKC	ZID ZKC ZTL	M	GLOBAL MOD [QBALL4] TO [QBA...	MDO	ADMIN
ONE GGO BNA QBALL5 KSTL	NOONE	ZTL	ZKC	ZKC ZME ZTL	M	GLOBAL MOD [QBALL4] TO [QBA...	MDO	ADMIN
R CAM J547 SYR J29 PXV QBALL5 KSTL	CTR	ZBW	ZKC	ZBW ZID ZKC ZOB	M	GLOBAL MOD [QBALL4] TO [QBA...	ED	ADMIN
IT CAM J547 SYR J29 PXV QBALL5 KSTL	MHT	ZBW	ZKC	ZBW ZID ZKC ZOB	M	GLOBAL MOD [QBALL4] TO [QBA...	ED	ADMIN

44 records

Select All Deselect All

Modifications

Global Modifications										Local Modifications				
ID	EffDate	Time	Init	ModUser	Center	OrigVal	FinalVal	Remarks	ZAB	ZAU	ZBW	ZDC	ZDV	Z
1	06/13/2002	05/07/2002 19:46:52	GW	ADMIN_METRON	ADMIN	LGC8	LGC9	STAR UPNUMBER...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2	06/13/2002	05/07/2002 19:48:48	GW	ADMIN_METRON	ADMIN	QBALL4	QBALL5	STAR UPNUMBER...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Figure 59: Search Results indicate Global Mod "QBALL4" is changed to "QBALL5"

Edit Global Modifications

In the Global Modifications section of the CDR or ANR Tool, you can determine which centers are affected by a global modification by viewing the red, green and gray boxes under the centers' codes. A red box indicates the global modification affects some of the center's routes; but the center has not updated their routes. A green box indicates that the global modification affects some of the center's routes; and the center has updated their affected routes. A gray box indicates that the center's routes are not affected by the global modification. Click the **Recalculate** button to update the boxes with the latest data.

Modifications

Global Modifications

Local Modifications

ID	EffDate	Time	Init	ModUser	Center	OrigVal	FinalVal	Remarks	ZAB	ZAU	ZBW	ZDC
1	08/08/2002	07/18/2002 13:51:46	GW	ADMIN_METRON	ADMIN	DALL6	DALL7	SID UPDATE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	08/08/2002	07/18/2002 13:52:15	GW	ADMIN_METRON	ADMIN	GLASR4	GLASR5	STAR UPNUMBER...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	08/08/2002	07/18/2002 13:52:42	GW	ADMIN_METRON	ADMIN	CHINS3	CHINS4	STAR UPNUMBER...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	08/08/2002	07/18/2002 13:53:10	GW	ADMIN_METRON	ADMIN	ROKIT5	ROKIT6	STAR UPNUMBER...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	08/08/2002	07/18/2002 13:53:31	GW	ADMIN_METRON	ADMIN	CLUBS	CANC_EL...	CANCELLED ELE...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	08/08/2002	07/18/2002 13:53:46	GW	ADMIN_METRON	ADMIN	NEW_ELE...	SWB	NEW ELEMENT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Refresh

Recalculate

New

Update

Delete

Figure 60: Recalculate Global Modification Information

Update a Global Modification

Administrator users have the ability to edit and delete global modifications that have not yet been applied at any centers. To Update a global modification, select the global modification record you wish to update. Then click the **Update** button. A window pops up to ask if you really want to edit the global modification record. Click **OK** to proceed with the update. Click **Cancel** to cancel the action. If you proceed with the update, the Global Modification Editor window opens. In this window, fill in the change you wish to make and click **OK** to proceed with the change. Clicking **Cancel** will close the window without taking any action.

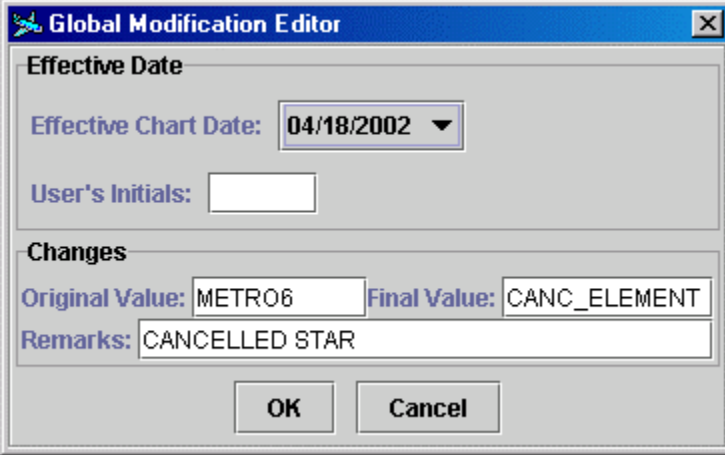
A screenshot of the 'Global Modification Editor' window. The window has a blue title bar with the text 'Global Modification Editor' and a close button. The main area is divided into two sections. The top section is titled 'Effective Date' and contains a label 'Effective Chart Date:' followed by a dropdown menu showing '04/18/2002'. Below this is a label 'User's Initials:' followed by an empty text box. The bottom section is titled 'Changes' and contains two labels: 'Original Value:' followed by a text box containing 'METRO6', and 'Final Value:' followed by a text box containing 'CANC_ELEMENT'. Below these is a label 'Remarks:' followed by a text box containing 'CANCELLED STAR'. At the bottom of the window are two buttons: 'OK' and 'Cancel'.

Figure 61: Global Modification Editor

Delete A Global Modification

To Delete a global modification, select on the global modification record you wish to delete. Click the Delete button to delete the selected record. A warning message will let you know which global modification is to be deleted and ask if you wish to proceed with your action. Click **OK** to delete the record. Click **Cancel** to close the window without taking any action on the record.

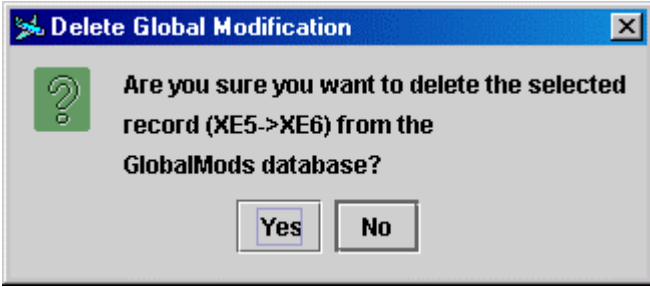
A screenshot of the 'Delete Global Modification' warning message window. The window has a blue title bar with the text 'Delete Global Modification' and a close button. The main area has a green question mark icon on the left. To the right of the icon is the text: 'Are you sure you want to delete the selected record (XE5->XE6) from the GlobalMods database?'. At the bottom of the window are two buttons: 'Yes' and 'No'.

Figure 62: Warning Message to Delete Global Modifications

Update Routes from a File

If you have a significant number of route record updates or have an existing route record file, you can choose to import a file into the CDR/ANR Tool to make all the necessary updates to your

route records. The CDR and ANR Tools can read ASCII files into the database. The CDR Tool has the additional capability of reading Stereo files into its database. The ATCSCC administrator can update any route record, while ARTCC administrators can only update those routes controlled by their own center.

Import an ASCII File

An ASCII file can be created in any text editor but to import a file into the CDR or ANR database, it must follow specific guidelines.

CDR Required ASCII Columns

To import an ASCII file into CDR, insert a header line with the column names listed and the required columns. You can put the required columns in any order. Note that RMT automatically fills in the remaining fields (e.g. ACNTR, TCNTR, ModTime and ModFlag).

1. **Rcode (Route Code)** - 8-character code with 3-character origin airport, 3-character destination airport- and 2-character facility-designated code.
2. **Orig (Origin)** - The 3 or 4-character origin airport code. (Canadian airports must be 4 characters).
3. **Dest (Destination)** - The 3 or 4-character destination airport code (Canadian airports must be 4 characters).
4. **DepFix (Departure Fix)** - Name of the departure fix for the route.
5. **Route String** - List of elements that make up the route.
6. **DCNTR (Departure Center)** - 3-character code for the departure (controlling) center.

ANR Required ASCII Columns

To import an ASCII file into ANR, insert a header line with the column names listed and the required columns. You can put the required columns in any order. Note RMT Tool will fill in the remaining fields automatically (e.g. ACNTR (Arrival Center), TCNTR (Traversed Centers), ModTime and ModFlag).

1. **Rcode (Route Code)** - 8-character route designator made up of the 2-character facility-designated code, 3-character departure airport code, and 3-character arrival airport code.
2. **Orig (Origin)** - The 3 or 4-character origin airport code. (Canadian airports must be 4 characters).
3. **Dest (Destination)** - The 3 or 4-character destination airport code (Canadian airports must be 4 characters).
4. **Route String** - List of elements that make up the route.
5. **DCNTR (Departure Center)** - 3-character code for the departure (controlling) center.
6. **Altitude** - The altitude of the advanced navigation route.
7. **Aircraft** - The type of aircraft that can utilize the route: jet, turbo, or prop.
8. **AddlInfo** - Additional information about the route. This may include a list of flights that cannot utilize the route or other pertinent information that does not fit in another field.
9. **EffTime** - The effective times for the route. ANRs are often only usable during certain hours of the day. Note that times given are GMT.

Select **Modifications > Update from File > From ASCII File**. The **Load DB From ASCII File** window pops up. In this window you need to define the file to use for the import and the way in which the CDR/ANR Tool should import your file.

CDR Load DB From ASCII File

User's Initials:

FileName: **Browse**

Loading Information

Load the database from a comma delimited file. The file must contain a header line listing the columns. The columns may appear in any order as long as all required columns are present. **Sample**

Loading Mode

☒ File contains all routes for the center(s). Records that reside in the database but not in the file will be marked for **Deletion!**
☐ File contains only a partial update of the center's routes. Records that reside in the database but not in the file will remain AS IS.

Center Option

Center Name: **All Centers** ▼

Progress:

Status: **Please enter a file name.**

OK **Cancel**

Figure 63: Load DB From ASCII File

Define Loading Options

The first step to loading routes from a file into the CDR database is to complete the fields in the **Load DB From ASCII File** window. The fields you must fill in are listed below:

- **User's Initials** - Enter your FAA-assigned initials in the **User's Initials** field of either window.
- **File Name** - The file name must include the location of the file. For example, C:\RMT\my_routes.txt in the File name field indicates that the file to be imported is my_routes.txt in the RMT folder of the computer's C drive. If you do not know the exact location of the file, use the Browse button to find the file.
- **Loading Information** - This field describes the requirements for loading an ASCII file into the CDR/ANR database. To view an example what your file should look like, click the **Sample** button.
- **Loading Mode** - You must tell the CDR/ANR Tool how to compare your file with the information already in the database. Your file may contain all the route records for your center, which overrides the information currently in the database and will delete any route records in the database that do not appear in your file. Or your file may contain only a partial

list of routes, which would prevent routes currently in the database from being deleted if they are not in your file. Click the box next to the appropriate option. The option that is checked defines the way in which your file is compared to the database. Please note that it is *very important* to choose the correct loading option when you are reading in routes from a file. Routes can be unintentionally deleted if the wrong option is chosen!

- **Center Option** - Use the pull-down menu provided to select your 3-character center name. Make sure your center name appears in the Center Name field.

Click **OK** to import the file and **Cancel** to quit the operation without starting the import. If you have failed to fill in all the fields in the window, you will get a pop-up warning message, which is reflected in the Status field. When your file begins importing, the Progress field informs you of the import status.

Import a Stereo File

RMT allows an ARTCC administrator to import CDRs directly from the HOST Stereo files through the CDR Tool. It is important to note that when you use this option, the CDR Tool assumes that this file contains *all* routes for your center. Stereo file formats differ between ARTCCs. The CDR Tool parses and reads the relevant information from the I and W lines in the file, other lines are discarded. Several centers use special characters in the route string (e.g. *, +) to designate different things. The Stereo files do not need to be modified; the CDR tool strips these characters before the records are entered into the database.

The CDR Tool compares the route codes and route strings in the Stereo file with those that are currently in the CDR database. Route codes in the Stereo file that are not in the database are marked as new (ModFlag = N). Those route codes that appear in the database but are not in the Stereo file are marked for deletion (ModFlag = D). The route strings are compared for route codes that appear in the Stereo file and in the database. Route codes with route strings that have not changed are marked with ModFlag = -, route strings that have been modified are given ModFlag = M.

Also note that the process of reading in the Stereo file can be repeated as many times as necessary. If problems are identified through the verification process, the Stereo file must currently be updated outside the RMT tool. The updated Stereo file can be read in again to make sure all the problems have been corrected. This is important to ensure that the routes in the host match the RMT database.

Note that the option to update routes using a Stereo file is only available in the CDR Tool. You *cannot* update ANRs using a Stereo file. Select **Modifications > Update From File > From Stereo File**. The **Load DB From Stereo File** window pops up. In this window you need to define the file to use for the import and the way in which the CDR Tool should import your file.

Obtaining a Stereo File from the HOST

The first step to loading routes from a Stereo file into the CDR database is to obtain a copy of the Stereo file that will be updated for the chart date in question. This can be done by Air Traffic or AOS (Automation) personnel. This is done by a “file transfer” from the VM/CMS system. In the example in Figure 64, the file named “CDRS 05-07-01 A!” is being received from the HOST

interface known as the Virtual Machine (VM) system and is being transferred to a disk with the name of “cdrs 05-17-01.txt”.

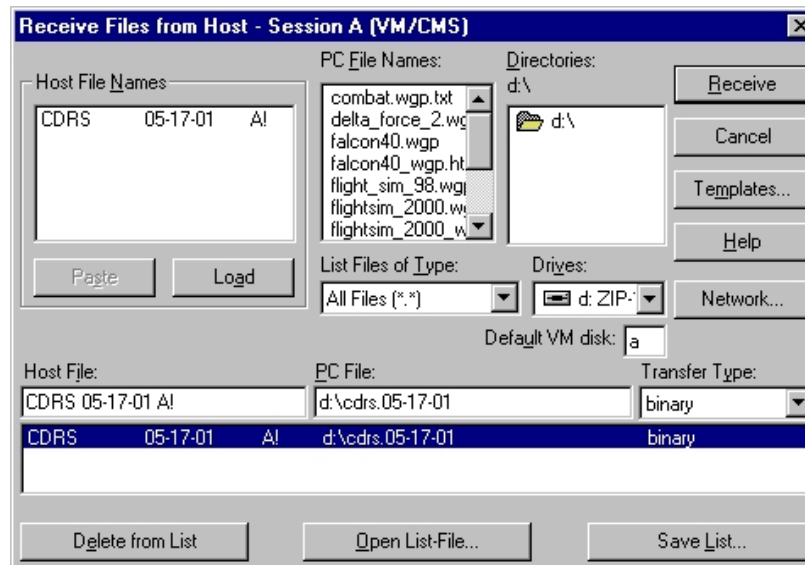


Figure 64: Transfer file from HOST to PC or Disk

Updating a Stereo File Prior to Loading

Once the file has been received from the HOST system, it can be opened using any word processor (MS Word, WordPerfect, WordPad, etc.) for editing. You can then use the search and replace function to make the necessary changes. Figure 65 shows an example of making a global modification in a Stereo File: LZARD1 to LZARD2. This allows you to check for all instances where the particular search subject occurs and replace them. Note that problems may occur if the search and replace changes the length of the line in the Stereo File.

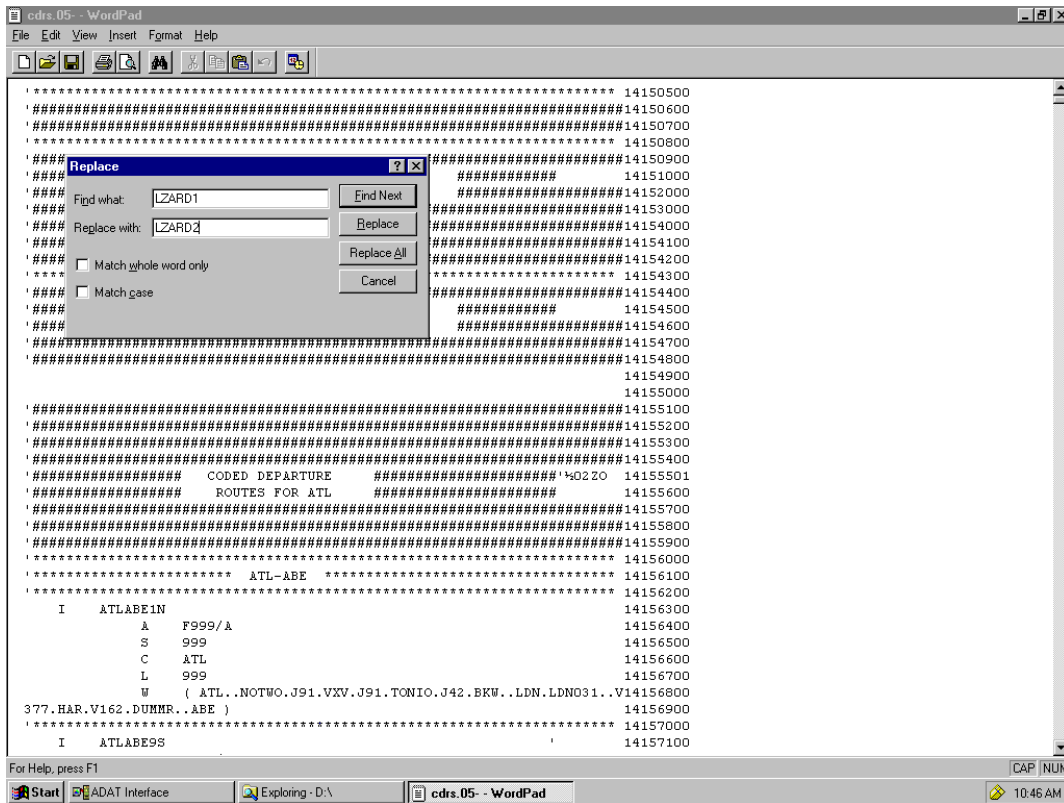


Figure 65: Using Word Processor Search and Replace Function to Update Stereo File

Once the changes have been made to the Stereo file, you might want to save it with a name that identifies it with the upcoming system update (i.e., CDRS 07-12-01.txt). Once it has been saved, it can be used to update the CDR database in RMT.

Import a Stereo File into RMT

ARTCC Administrator users can update the CDR staging database using the text file created in the previous step from the CDR Tool Window within RMT.

Select **Modifications > Update from File > From Stereo File**. The **Load DB From Stereo File** window appears and allows you to select the file to use for the import.

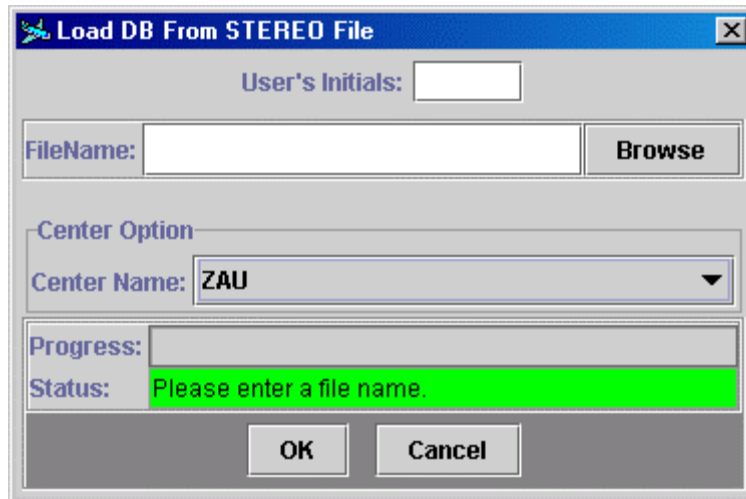


Figure 66: Load DB From Stereo File window

Define Loading Options

The first step to loading routes from a file into the CDR database is to complete the fields in the **Load DB From ASCII File** window. The fields you must fill in are listed below:

- **User's Initials** - Enter your FAA-assigned initials in the **User's Initials** field of either window.
- **File Name** - The file name must include the location of the file. For example, C:\RMT\my_routes.txt in the File name field indicates that the file to be imported is my_routes.txt in the RMT folder of the computer's C drive. If you do not know the exact location of the file, use the Browse button to find the file.
- **Center Option** - Use the pull-down menu provided to select your 3-character center name. Make sure your center name appears in the Center Name field.

Click **OK** to import the file and **Cancel** to quit the operation without starting the import. If you have failed to fill in all the fields in the window, you will get a pop-up warning message, which is reflected in the Status field. When your file begins importing, the Progress field informs you of the import status.

Note that when you import a Stereo file, the CDR Tool assumes that this file contains all routes for your center. The CDR Tool will mark those routes that appear in the database, but not in your Stereo file, as "deleted."

Importing Stereo File Back Into HOST

Once all of the routes have been loaded into the database, you can import the Stereo file back into the HOST. To learn how to load routes from the Stereo file into the CDR database, read the next few sections in this manual. To import the Stereo file back into the HOST, proceed with the following:

- If all of the routes were good on the first try, use the Stereo file to now go back and update the HOST record for the next chart date. Depending on local procedures, it may be necessary to submit an Adaptation Request to the local AOS office.
- If all of the routes were not good and corrections had to be made to the file, it will be necessary to again revise the Stereo file that you started with to ensure that the RMT file and the HOST file are identical. You can use the word processor to revise those routes using the information from the upload attempts to the RMT. Once you have completed the revisions, the file is ready to be imported back to the HOST as the CDR file for the next update.

Note: Keep in mind that many facilities have cutoff dates for updates that are prior to the closing date of the RMT. Users should update as early as possible to avoid possibly missing cutoffs.

Error Checking Your Imported File

When you import an ASCII or Stereo file, the CDR/ANR Tool validates your route records against the NFDC tables for any potential problems. The RMT route validation includes the final values from the global modifications table. As HOST Stereo files are read into the tool, or updates are made through the Route Editor window, the NFDC tables as well as the global modification tables are checked for valid element names. This results in fewer "Token Not Found" warning messages as the CDR and ANR updates are being made. The STARDP.txt file from the NFDC CD is used to validate the STAR and DP element names. This file has all the STAR/DP names and helps create fewer warning messages as routes are being updated.

Error and Warning Messages

RMT provides warning messages if problems are found during the validation process. Certain warnings can be "ignored" and the routes can be entered into the database. Other errors are more serious and the routes cannot be entered without modification. The following error/warning messages are the most common:

Error Messages

- *"Bad Route Code"* – the CDR route code must be 8 characters in length.
- *"No Destination"* – RMT was unable to parse the destination from the route string.
- *"RCode Origin Differs from Route Origin"* - the origin airport in the route string must match characters 1-3 in the route code.
- *"RCode Destination Differs from Route Destination"* - the destination airport in the route string must match characters 4-6 in the route code.

Warning Messages

- *"Token Not Found in NFDC Database" or "Token Type Not Known"* – the specified route string element was not found in the NFDC tables. Note that Canadian and Mexican elements are NOT yet contained in the database. These error messages may be ignored.
- *"Bad Route Code - I or O in Last Two Characters"* – RMT provides a warning message if the 7th or 8th characters of the route code are "I" or "O". You **cannot** use these characters in the 7th or 8th position because it causes confusion with the numbers 1 and 0.
- *"Duplicate Element in Route"* – the specified element appears twice in the route string.

Files Created During the Error Checking Process

The CDR Tool creates four ASCII files during the error-checking process. The routes in your file will be saved to one of the four files generated by RMT.

1. **Check** - the word "check" is appended to your original file name and becomes a separate file (i.e. my_routes.txt.check). This file contains all routes that you should look over before importing them into the database.
2. **Good** - The word "good" is appended to your original file name and becomes a separate file (i.e. my_routes.txt.good). The 'good' file contains all routes that were validated and are ready to be loaded into the database with no further changes.
3. **Loaded** - The word "loaded" is appended to your original file name and becomes a separate file (i.e. my_routes.txt.loaded). The 'loaded' file contains all routes that passed the error-checking process and were loaded into the database.
4. **Reject** - The word "reject" is appended to your original file name and becomes a separate file (i.e. my_routes.txt.reject). The "reject" file contains all routes that you reject from the import process and decide to exclude from the database.

These text files (ASCII) can be read into the tool at a later time using the **Load DB from ASCII File** option. The “check” and “reject” files include the error/warning messages described below. These files can be used to identify problem route codes that may need to be changed in the host Stereo file. You can find these files in the same directory as the original Stereo file that you are reading in to the RMT tool.

Once the import process is complete, a **File Statistics** window opens to tell you how many route records were good and how many records had problems. From the File Statistics window, you can see into which group your route records are placed.

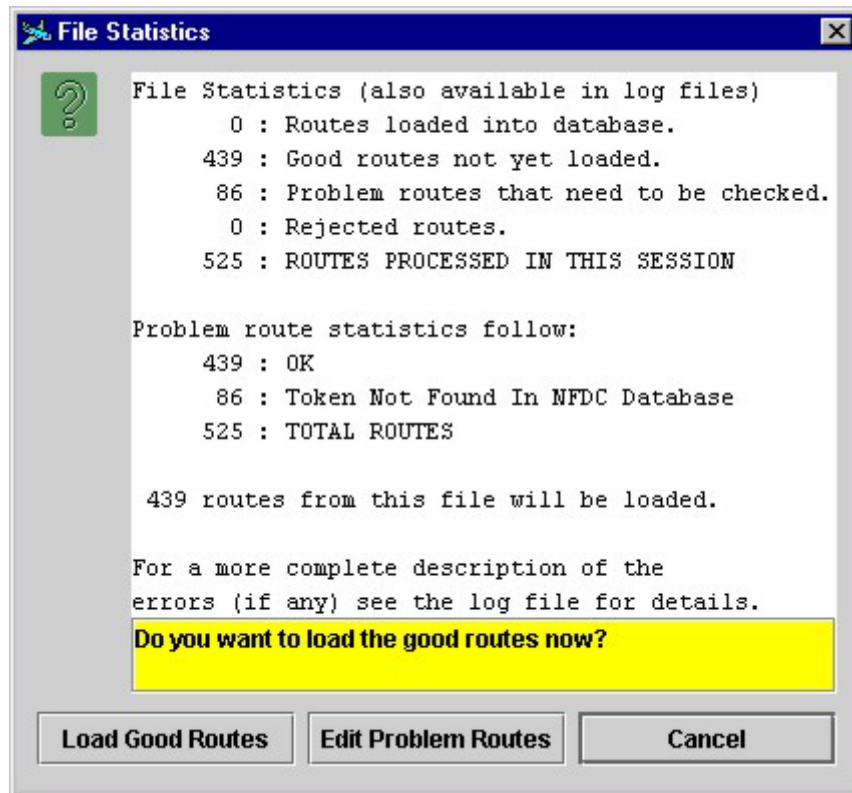


Figure 67: File Statistics After First Pass of Import

In Figure 67, the user completed the first phase of importing a Stereo file, the verification process. You can see that 439 of the routes are good and ready to be loaded. However, 86 routes have problems that the user needs to check.

Load Good Routes

Once the CDR/ANR Tool completes the first phase of the import, you can load good routes into the database. There are two ways to load your good routes into the database, depending on whether you wish to load the routes immediately or wait to load them at another time.

- To load your good routes immediately, click **Load Good Routes** in the File Statistics window. This will load your good routes immediately, giving you the import status and final statistics at the end of the import.
- To wait and load your good routes at another time, close the File Statistics window. At any other time you can choose **Modifications > Update From File > Update from ASCII File** in the CDR/ANR Tool. Use the Browse button in the **Load DB From ASCII File** window to locate the appropriate '.good' file. This file contains only good routes that are ready to be loaded into the database. For example, if your original file was ZTL_ROUTES_Stereo.txt, the file you will load will be ZTL_ROUTES_Stereo.txt.good. Complete the rest of the information in the Load DB From ASCII File window and click OK to perform the import. At the end of the import, a File Statistics window pops up. You should see all the routes marked as "good" in the File Statistics window. Click **Load Good Routes** at the bottom of the File Statistics window.

Once you load your good routes, you should see the number of loaded routes listed as "Routes loaded in the database" in the File Status window. These routes will now be in the ".loaded" file in the same directory as your original imported file. The ".good" file should be empty.

Edit Problem Routes

Once the CDR/ANR Tool completes the verification process, you can edit any problem routes. There are two ways to edit problem routes, depending on whether you wish to edit the routes immediately or wait to edit them at another time.

- If you wish to edit your routes immediately, click the **Edit Problem Routes** button in the File Status window. This brings up the CDR/ANR Tool Route Editor and allows you to make the necessary changes to each problem record.
- To wait and edit the routes, close the File Status window by clicking Cancel. When you wish to edit the routes, look for the appropriate file ending in ".check." In the CDR/ANR Tool, select **Modifications > Update From File > Update from ASCII File** and select the .check file as the file to be loaded. Fill in the appropriate information in the **Load DB From ASCII File** window and click OK to run another loading pass. The File Status window that results from this action should list all your routes as "Problem routes that need to be checked" and give details of the problems found in the route records. From the File Status window, click **Edit Problem Routes**. This brings up the **Route Editor** and allows you to make the necessary changes to the record.
- If you wish to edit the route records directly in the file outside of the CDR/ANR Tool, you can open the ".check" file in any text editor. For example, if you knew that there was a recurring typographical error, you could open the file in a text editor to conduct a Search and Replace action to fix the error. You could then perform another loading pass in the CDR/ANR Tool using the edited file.

When you choose to edit routes in the CDR/ANR Tool, the **Route Editor** window pops up (Figure 68). In this window you can modify the route record, ignore any warnings, or reject the route.

The screenshot shows the 'Route Editor' window. At the top, there's a table with columns: Route Code, Origin, Destination, DFix, DCenter, ACenter, TCenters, and Initials. The data row shows: ATLAPF9E, KATL, KAPF, EATWO, ZTL, ZMA, ZJX ZMA ZTL, and GEW. Below this table, the 'Route String' field contains 'KATL EATWO IRQ AMG TAY J119 PIE SRQ3 KAPF'. The 'Remarks' field is empty. The 'Errors and Warnings' section is highlighted in yellow and contains the following text:

--- WARNINGS -----

(1) WARNING: Token Not Found In NFDC Database

Token SRQ3 was not found in any of the NFDC tables.

At the bottom of the window, there are six buttons: 'Check', 'Reset', 'Cancel', 'Ignore Warnings', 'Ignore All Similar Warnings', 'Reject Route', and 'Reject All Similar Routes'.

Route Code	Origin	Destination	DFix	DCenter	ACenter	TCenters	Initials
ATLAPF9E	KATL	KAPF	EATWO	ZTL	ZMA	ZJX ZMA ZTL	GEW

Route String: KATL EATWO IRQ AMG TAY J119 PIE SRQ3 KAPF

Remarks:

Errors and Warnings

--- WARNINGS -----
 (1) WARNING: Token Not Found In NFDC Database
 Token SRQ3 was not found in any of the NFDC tables.

Buttons: Check, Reset, Cancel, Ignore Warnings, Ignore All Similar Warnings, Reject Route, Reject All Similar Routes

Figure 68: Route Editor

Fixing the Route Record

When the Route Editor window opens, the fields are already filled in with the information for the first problem route. In the **Errors and Warnings** section of the Route Editor window, you can view the specific problems found in the route. Read the error/warning message and make the appropriate change to the route record by typing new information into one of the fields. For example, in Figure 68, the NFDC tables could not find SRQ3 as a valid element of the route string. For this example, let's say that SRQ3 should really be SRQ4. Change the '3' to a '4' in the Route String field and click **Check** to review the route again. If the route record is now correct, you will see **Route is okay** in the Errors and Warnings section (Figure 69). If the route has more than one problem listed in the Errors and Warnings section, you will need to make multiple corrections before you see that your route is okay. Once the Errors and Warnings section indicates that your route is good, click **OK** to go to the next problem route. Click **Reset** to return the fields in the Route Editor window to their original values. Doing this will cause the original error/warning messages to appear. Click **Cancel** to close the window without taking any action.

Note that Canadian and Mexican airports, nav aids, and fixes are not yet included in the database. Warning messages will appear stating that "TOKEN is not found." If the message is generated because of a Canadian element, you can ignore the message.

The screenshot shows the 'Route Editor' window with the following data:

Route Code	Origin	Destination	DFix	DCenter	ACenter	TCenters	Initials
ATLAPF9E	KATL	KAPF	EATWO	ZTL	ZMA	ZJX ZMA ZTL	GEW

Route String: KATL EATWO IRQ AMG TAY J119 PIE SRQ4 KAPF

Remarks:

Errors and Warnings: Route is okay.

Buttons: OK, Reset, Cancel, Ignore Warnings, Ignore All Similar Warnings, Reject Route, Reject All Similar Routes

Figure 69: Edited Route

Ignore Warnings

At times the CDR/ANR Tool may indicate a problem with a route record when the record is actually valid. Remember, the validation against the NFDC tables is provided to help prevent erroneous data from being entered into the database and facilitate the verification process. This process is still under development; check your warning messages carefully. In the Route Editor window, you can choose to ignore the messages in the Errors and Warnings section, which tells the CDR/ANR Tool to mark the route records as "good" and ready to load.

To ignore the warnings for a single route, click **Ignore Warnings** in the Route Editor window. To ignore a specific warning that appears in many route records, click **Ignore All Similar Warnings** in the Route Editor window. Note that if a record has more than one warning/error message, it will still appear in the Route Editor window for you to fix unless you have chosen to ignore all the different types of warnings/errors that appear in that route record.

Use the **Ignore All Similar Warnings** button *carefully!* For example, if you choose to ignore the warning "Token SQK3 not found," the CDR/ANR Tool will ignore all routes with the "Token not found" error. That means that any route with that error will be ignored, not necessarily just those routes with the "SQK3" problem.

Reject Routes

You can choose to reject route records, which would prevent them from being loaded into the database. To reject a single route, click **Reject Route** in the Route Editor window. To reject all routes with a similar warning/error message, click **Reject All Similar Routes**. Any rejected routes will be placed in a file marked ".reject." For example, you could reject all routes missing a destination.

Once you are finished editing and rejecting routes, the File Status window will appear again with the latest statistics about the route record groupings. You can choose to Load Good Routes from this window or start the process over again if necessary.

Complete Route Record Loading

Any time you complete loading good routes, a window will let you know how many total routes were loaded (Figure 70). It is a good idea to verify the number of records loaded for your center after the file has been read in. Note the number of new, modified, and deleted records by reviewing the ModFlag column. If the number of routes is incorrect, you may have chosen the wrong loading option in the Load DB From ASCII/Stereo File window (see Define Loading Options on page 77).

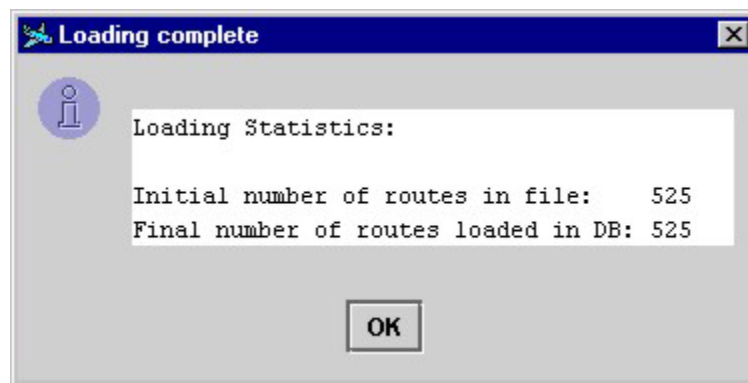


Figure 70: Loading Complete

File Creation and Naming

Note that the more file imports you perform, the more files are created. For example, if you load good routes by opening the CDR Tool and importing the file my_routes.txt.good, the CDR Tool again creates four files for the ".good" file during import. So you will see "my_routes.txt.good.good," "my_routes.txt.good.check," "my_routes.txt.good.loaded," and "my_routes.txt.good.rejects." However, all the route records in a '.good' file should be ready for loading and should produce blank files for the other three appended names. Be aware of the naming scheme and files created to make sure you are working with the appropriate file.

ATCSCC Administrator Functions

There are certain functions that only the ATCSCC administrator can perform. These include sending messages through RMT to active users and updating the NFDC tables. The administrator functions are all available from the Admin menu, visible only to the ATCSCC administrators when working in the CDR Tool, ANR Tool, or NFDC Tool.

Only the ATCSCC administrator can perform the functions listed in this chapter.

CDR and ANR Tool Administrator Functions

There are several administrator functions in the CDR and ANR Tools that allow the ATCSCC administrator to make changes to manage the databases and send messages to active RMT users.

Send a Message to Active Users

Sending a message to RMT users is a useful way to distribute important information immediately. For example, the CDR or ANR database may be offline for a certain time period while it is being updated. Anyone using RMT would need to know this information.

The ATCSCC administrator can send RMT-related messages to all active RMT users by using the Broadcast Message function. Active RMT users are those currently logged in to the system. To broadcast a message, select **Admin > Broadcast a Message**. The Broadcast Message window appears. Type any text into the window for your message. To send the message click **OK**. To close the window without sending a message click **Cancel**.

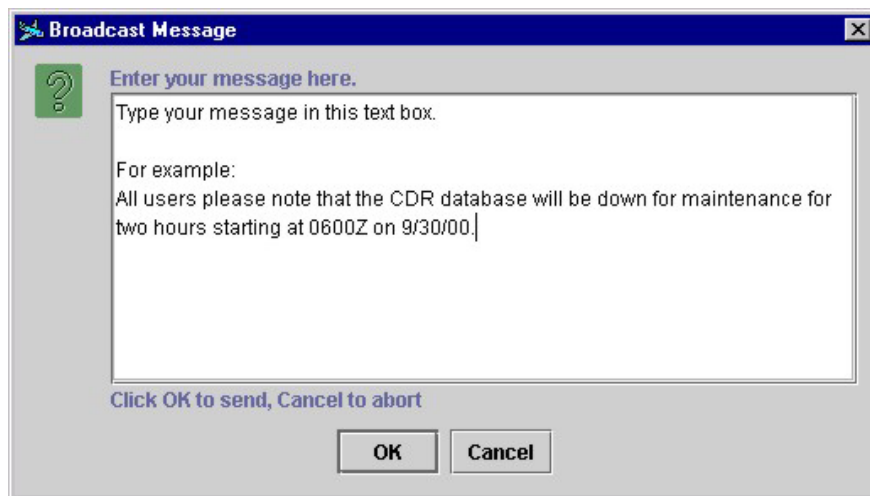


Figure 71: Broadcast a Message

Save All Records

You can save the CDR/ANR staging or operational database to a file outside of RMT. This can be especially helpful if the database ever needs to be reloaded. To save the database, first make sure you are in the appropriate Tool window (CDR or ANR) and have selected either Operational or Staging. Select **Admin > Save Database**. The Save Database window appears. Note that the window will be named according to the database you are saving. For example, in Figure 72, the window is labeled “Save CDR Staging Database” because the user is downloading all files in the CDR Staging Database. In this window, enter a file location and name for the saved database. If you wish to save Global Mods in addition to the database, check the Global Mods box and enter a file location and name for the saved global mods.

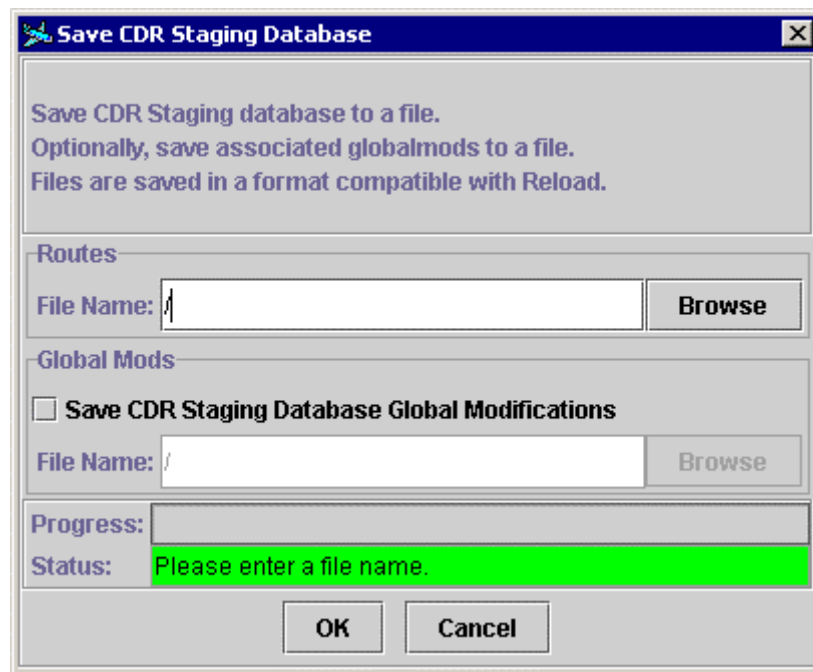


Figure 72: Save Database

Delete All Records

If either the CDR/ANR staging or operational database needed to be reloaded for some reason, only the ATCSCC administrator can delete all the database records and perform the reload. To delete all the route records in the CDR/ANR database, select **Admin > Delete All Entries**. A warning window pops up to ask you to verify whether you want to delete all the records (Figure 73). To perform the deletion, click **OK**. Note that the Erase Database option will delete all route records and their associated global modifications. To close the window without deleting any records, click **Cancel**.



Figure 73: Delete All Entries Warning Dialog

Reload the Database

The CDR and ANR databases can be reloaded using an ASCII file created specifically to replace the database.

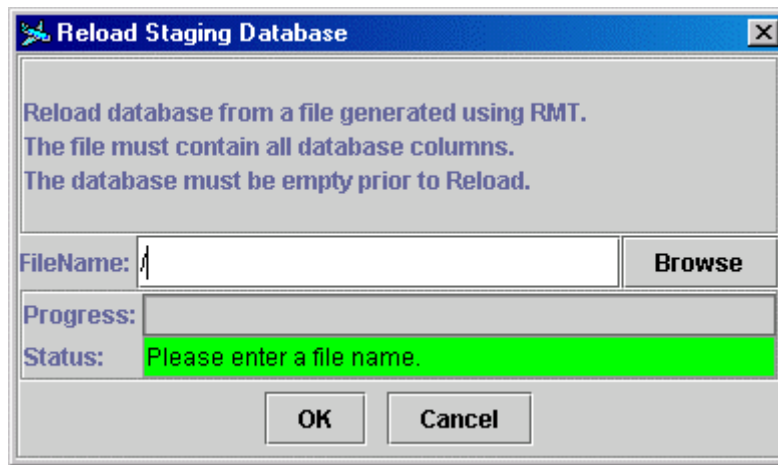


Figure 74: Reload Staging Database

Transfer Staging Database to Operational Database

The staging database is transferred over to become the operational database every 56 days on the published chart date. The ATCSCC administrator is the only user who can actually make the transfer. The database transfer can be set to occur automatically or can be manually overridden.

Automatically Transfer the Database

RMT contains a function to automatically transfer the staging database to the operational database every 56 days on the specified chart dates. The automatic transfer is always on by default.

If the automatic transfer function is off, you can turn it back on by selecting **Admin > Change Auto Staging -> Op**. A server message pops up to tell you that the automatic staging to operational database copy has been turned on.

Manually Transfer the Database

The ATCSCC administrator may copy the staging database to the operational database at any time. Once the automatic transfer function is off, you can manually transfer the data in the staging database to the operational database. To perform the transfer, select **Admin > Staging to Operational**. The Staging to Operational window pops up (Figure 75). In freeze date field, type the date on which the route records were frozen for the current database transfer. Any route records modified after the date you enter will not be transferred to the operational database. By default, the freeze date is set to the day before the chart date.

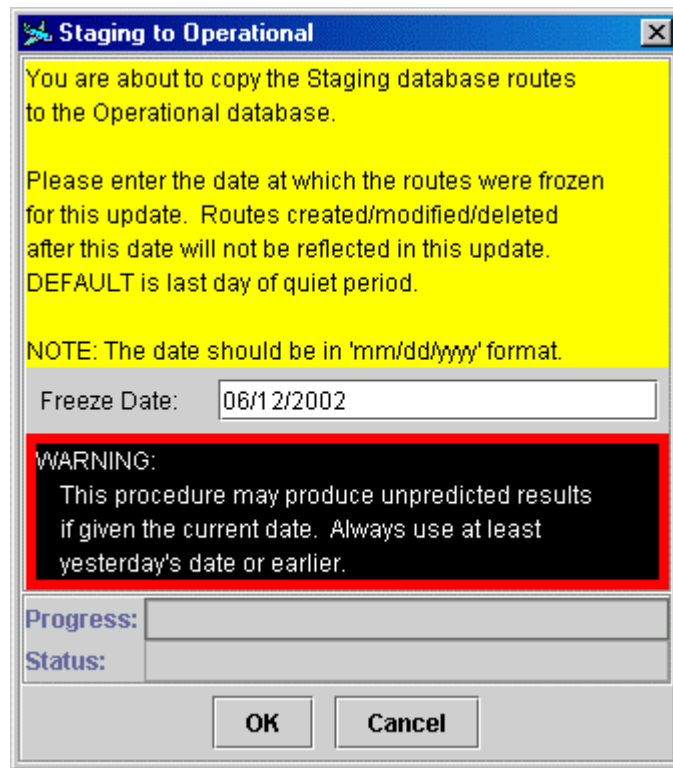


Figure 75: Copy the Staging Database to the Operational

Once you enter the freeze date, click **OK** to perform the transfer. The transfer progress and pertinent status messages appear in the bottom of the window.

To close the window without performing the transfer, click **Cancel**.

Change Staging Verification

Both the CDR and ANR Staging databases are either in a "verified" or "not verified" state, depending on whether the routes in the databases have been reviewed for errors or not. As the ATCSCC Administrator, you can change the status of the staging database in either the CDR Tool or ANR Tool. To change the status of a database, make sure you are in the correct tool (CDR or ANR). Select **Admin > Change Staging Verification**. RMT displays a prompt window that informs you of the current status of the database and asks if you wish to change the status. If you wish to change the status, click **Yes**. To leave the status as is, click **No**.

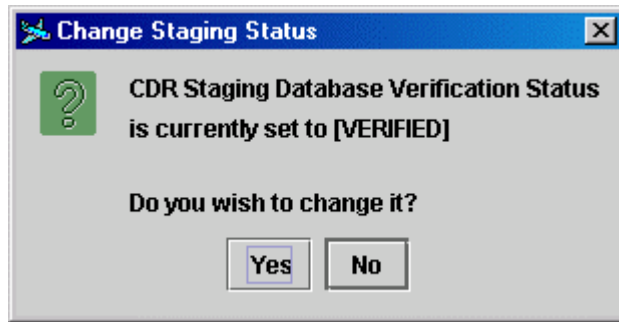


Figure 76: Changing the Status of the CDR Staging Database

NFDC Tool Administrator Functions

The National Flight Data Center (NFDC) regularly publishes a CD-ROM with flight-related information tables. This CD-ROM is used to update much of the data used by the RMT program, including location and name information for airports, fixes, and nav aids. The information in the NFDC tables is also used to validate route elements entered by RMT users.

Only the ATCSCC administrator can update the NFDC information tables.

Update NFDC Information Tables

To update the NFDC Tool database, select **Admin > Update Database from CD**. The **Load DB From File** window appears (Figure 77). Type in the location of the CD-ROM or use the Browse button to locate the NFDC CD-ROM. Click all of the information tables you want to update. Any table option with a checked box next will be included in the update.



Figure 77: Update NFDC Tables

Information table options include:

- Pref Routes
- Loc ID
- Fixes
- Airways
- Nav aids
- Airports
- SIDs
- STARs
- AwyIntxns

Once you have selected the desired table options, click **OK** to perform the update. The bottom of the Load DB From File window will show specific loading progress messages as well as track the total progress of the update. Pertinent status messages are displayed at the very bottom of the window. Status messages include instructions on performing the update and warning messages.

Update PARs

Updating the preferred arrival routes (PARs) database is similar to updating the NFDC tables. Currently the ATCSCC is responsible for updating the PARs to make sure the STARs are current.

To update the PARs, select **Admin > Update Database from CD**. The **Load DB From File** window appears (Figure 77). Type in the PAR file location and name or use the Browse button to locate the file. Click the PARs option so that it is checked. You should not have any other option checked. If another option is checked, click that option to uncheck its box.

Click **OK** to perform the update. The bottom of the Load DB From File window will show specific loading progress messages as well as track the total progress of the update. Pertinent status messages are displayed at the very bottom of the window. Status messages include instructions on performing the update and warning messages.

Appendix

Introduction

This appendix contains a description of the configuration requirements for RMT software. In order to successfully use the program, you must meet the hardware requirements, identify pertinent information in the Configuration files and correctly set environment variables.

Hardware Requirements

For HP, Sun and NT machines, you will need to meet the following requirements in order to run RMT:

Memory**- 32 Mb minimum. 64Mb recommended.

Disk space- 50Mb

Ability to run Java Runtime Environment 1.3_1_02 or higher.

**If memory is an issue for your system, contact Metron technical support for changes to the configuration file you can make to help run RMT.

RMT Client Configuration

The following is an example of CDR Tool **rmtusr.cfg.ini** file. By default, the user configuration file is saved in your Profiles directory on Windows NT systems. UNIX users can find their user configuration file in their home directory. Lines that start with “#” are comments and text located between “.” is also a comment.

```
CDR.RMTClient
{
    WINDOW_X_SIZE    944
    WINDOW_Y_SIZE    695
    SAVE_DIR         /
    USER_NAME
    USER_PASS
}
CDR.CDRServiceClient
{
    FONT_SIZE        Medium
    DATABASE          Operational
    SHOW_MODS         true
    QUERY_PANEL
    {
        ModTime      0 true 75
        RCode        1 true 80
        Orig         2 true 56
        Dest         3 true 52
        Route_String  4 true 435
        DepFix       5 true 66
        DCNTR        6 true 75
        ACNTR        7 true 75
        TCNTRs       8 true 106
        ModFlag      9 true 55
        Remarks     10 true 202
        ModInit     11 true 75
        ModUser     12 true 75
    }
}
```

```

    }
}
GCDR.GCDRServiceClient
{
    MAP_2D
    {
        Miscellaneous_Routes
        {
            Visibility    true
            Color    204,102,0
            Thickness    2
            Use_Filters    true
            Font
            {
                Name    Arial
                Size    10
                Color    204,102,0
                Visibility    false
                Style    Plain
            }
        }
        Victor_Routes
        {
            Visibility    false
            Color    255,255,255
            Thickness    1
            Use_Filters    true
            Font
            {
                Name    Arial
                Size    12
                Color    255,255,255
                Visibility    true
                Style    Plain
            }
        }
        Fixes
        {
            Visibility    false
            Color    0,0,255
            Thickness    4
            Use_Filters    true
            Font
            {
                Name    Arial
                Size    10
                Color    0,0,255
                Visibility    true
                Style    Plain
            }
        }
        Background
        {
            Visibility    true
            Color    0,204,255
            Use_Filters    true
        }
    }
}

```

```

Canadian_Provinces
{
    Visibility    false
    Color         155,155,155
    Thickness     1
    Use_Filters   true
    Fill          true
    Fill_Color    200,200,200
    Font
    {
        Name      Arial
        Size      10
        Color      0,0,0
        Visibility false
        Style      Plain
    }
}
Canadian_Centers
{
    Visibility    false
    Color         80,100,254
    Thickness     1
    Use_Filters   false
    Fill          false
    Fill_Color    80,100,254
    Font
    {
        Name      Arial
        Size      12
        Color      80,100,254
        Visibility false
        Style      Plain
    }
}
Range_Rings
{
    Visibility    true
    Color         150,0,255
    Thickness     1
    Use_Filters   true
    Font
    {
        Name      Arial
        Size      10
        Color      150,0,255
        Visibility false
        Style      Plain
    }
}
Centers
{
    Visibility    false
    Color         80,100,254
    Thickness     1
    Use_Filters   false
    Fill          false
    Fill_Color    80,100,254

```

```

        Font
        {
            Name    Arial
            Size    12
            Color    80,100,254
            Visibility true
            Style    Plain
        }
    }
    Mexican_States
    {
        Visibility false
        Color    155,155,155
        Thickness 1
        Use_Filters true
        Fill true
        Fill_Color 200,200,180
        Font
        {
            Name    Arial
            Size    10
            Color    0,0,0
            Visibility false
            Style    Plain
        }
    }
    Country_Map
    {
        Visibility true
        Color    155,155,155
        Thickness 1
        Use_Filters false
        Fill true
        Fill_Color 192,192,192
        Font
        {
            Name    Arial
            Size    10
            Color    0,0,0
            Visibility false
            Style    Plain
        }
    }
    Sectors_-_High
    {
        Visibility false
        Color    80,100,254
        Thickness 1
        Use_Filters false
        Fill false
        Fill_Color 80,100,254
        Font
        {
            Name    Arial
            Size    12
            Color    80,100,254
            Visibility false

```

```

        Style    Plain
    }
}
Sectors_-_Superhigh
{
    Visibility    false
    Color    204,0,204
    Thickness    1
    Use_Filters    false
    Fill    false
    Fill_Color    255,0,255
    Font
    {
        Name    Arial
        Size    12
        Color    204,0,204
        Visibility    false
        Style    Plain
    }
}
Jet_Routes
{
    Visibility    false
    Color    255,0,255
    Thickness    1
    Use_Filters    true
    Font
    {
        Name    Arial
        Size    12
        Color    255,0,255
        Visibility    true
        Style    Plain
    }
}
PFR_Routes
{
    Visibility    true
    Color    51,0,51
    Thickness    2
    Use_Filters    true
    Font
    {
        Name    Arial
        Size    10
        Color    51,0,51
        Visibility    false
        Style    Plain
    }
}
NavAids
{
    Visibility    false
    Color    0,255,0
    Thickness    6
    Use_Filters    true
    Font

```

```

        {
            Name    Arial
            Size     10
            Color    0,255,0
            Visibility true
            Style    Plain
        }
    }
    Airports
    {
        Visibility false
        Color    255,255,0
        Thickness 4
        Use_Filters true
        Font
        {
            Name    Arial
            Size     12
            Color    255,255,0
            Visibility true
            Style    Plain
        }
    }
    Sectors_-_Low
    {
        Visibility false
        Color    255,51,51
        Thickness 1
        Use_Filters false
        Fill false
        Fill_Color 0,0,255
        Font
        {
            Name    Arial
            Size     12
            Color    255,51,51
            Visibility false
            Style    Plain
        }
    }
    CDR_Routes
    {
        Visibility true
        Color    0,153,102
        Thickness 3
        Use_Filters true
        Font
        {
            Name    Arial
            Size     10
            Color    0,153,102
            Visibility false
            Style    Plain
        }
    }
    ANR_Routes
    {

```

```

        Visibility true
        Color 132,106,13
        Thickness 3
        Use_Filters true
        Font
        {
            Name Arial
            Size 10
            Color 132,106,13
            Visibility false
            Style Plain
        }
    }
}
MAP_2D_FILTERS
{
    Sectors_-_High ,
    Sectors_-_Low ,
    Country_Map ,
    Mexican_States ,
    Fixes ,
    Navaids ,
    Jet_Routes ,
    Victor_Routes ,
    Sectors_-_Superhigh ,
    Centers ,
    Airports ,
    Canadian_Provinces ,
    Canadian_Centers ,
}
}
CDR.nfdc.NFDCServiceClient
{
    PrefRoutes
    {
        Orig 0 true 52
        Route_String 1 true 278
        Dest 2 true 52
        Hours1 3 true 75
        Hours2 4 true 66
        Hours3 5 true 69
        Type 6 true 59
        Area 7 true 111
        Altitude 8 true 75
        Aircraft 9 true 75
        Direction 10 true 75
        Seq 11 true 75
        DCNTR 12 true 75
        ACNTR 13 true 75
    }
    PARs
    {
        Destination 0 true 75
        PAR 1 true 363
        Seq 2 true 75
    }
    FONT_SIZE Medium
}

```

```

DATABASE   Airports
LocID
{
    LocID      0 true 75
    Facility    1 true 418
    Location    2 true 176
    FLTWO       3 true 79
    Tie-in_Facility  4 true 96
    Center      5 true 75
}
NavAids
{
    NavAid_Name  0 true 99
    Latitude     1 true 75
    Longitude    2 true 75
    Type         3 true 75
    Center       4 true 118
}
Airports
{
    Airport      0 true 75
    Facility_Name 1 true 75
    Latitude     2 true 75
    Longitude    3 true 75
    Elevation    4 true 75
    City         5 true 75
    State        6 true 75
    Center       7 true 75
}
STARs
{
    STAR         0 true 75
    Transition    1 true 75
    Transition_Name 2 true 131
    Latitude     3 true 83
    Longitude    4 true 85
    Type         5 true 75
    Fix          6 true 75
    Extended_Name 7 true 185
}
Fixes
{
    Fix_Name     0 true 75
    State        1 true 139
    Latitude     2 true 75
    Longitude    3 true 75
    Category     4 true 75
    Center       5 true 75
    Fix_Use      6 true 75
}
Airways
{
    Airway       0 true 75
    Latitude     1 true 75
    Longitude    2 true 75
    Min_Alt      3 true 75
    Fix_Name     4 true 275
}

```



```

}
SIDs
{
    SID      0 true 75
    Transition 1 true 75
    Transition_Name 2 true 112
    Latitude   3 true 75
    Longitude  4 true 75
    Type       5 true 75
    Fix        6 true 75
    Extended_Name 7 true 133
}
AWY_INTXN
{
    Fix_Name    0 true 75
    Latitude    1 true 75
    Longitude    2 true 75
    Center      3 true 75
    Airway_1    4 true 75
    Airway_2    5 true 75
}
}
CDR.anr.ANRServiceClient
{
    FONT_SIZE    Medium
    DATABASE     ANR Staging
    SHOW_MODS    true
    QUERY_PANEL
    {
        ModTime    0 true 149
        RCode      1 true 75
        Orig       2 true 64
        Dest       3 true 60
        Route_String 4 true 375
        Altitude   5 true 75
        DCNTR      6 true 75
        ACNTR      7 true 73
        TCNTRs     8 true 95
        Aircraft   9 true 75
        EffTime    10 true 75
        AddInfo    11 true 75
        ModFlag    12 true 75
        Remarks    13 true 191
        ModInit    14 true 75
        ModUser    15 true 77
    }
}
}

```


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